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ART. I. *Remarks on the Resuscitation of persons Asphyxiated from Drowning.* By JAMES STEWART, M.D., of New York.

THE almost entire failure in attempts to restore animation to those who have been asphyxiated by drowning, which has occurred tomyself and to many medical friends whom I have consulted in reference to this subject, even in instances, as I have been informed, where feeble respiration has existed, led me some time since to doubt the correctness of the means extensively recommended for effecting this object, and to reflect upon the circumstances connected with the submersion of the body in water, and its actual condition when taken out, as the principal guide for the adoption of the proper remedies for resuscitation, and the order in which they should be used.

The application of warmth in the treatment of those in a state of suspended animation from submersion is of primary importance, and not a mere auxiliary remedy; and the success attending a recent case where this course was adopted, has confirmed me in the correctness of these views.

The application of warmth is, in most cases, recommended, but only as a means auxiliary to that of insufflation of the lungs. The latter has been extensively urged as the first and principal means, and whatever other measures are adopted, such as warmth, frictions, etc., persevering attempts to excite respiration by filling the lungs with air from a common bellows are directed never to be omitted, if a more suitable and delicate apparatus for the same purpose cannot be obtained.

It is not my intention to underrate the important principle of supplying the deficient atmospheric air, but to object to the mode which is recommended. If no other method can be devised than forcible insufflation, it had better by far be abandoned altogether, and that which has been considered as a mere appendage, adopted in its place as the most rational

mode of treatment, and the only one which promises any prospect of success. Before I undertake to suggest a different plan of procedure from that strongly advised by high authority in the profession, it would be proper to consider what objections exist to the latter, and what are the results of attempts to induce respiration in the manner usually recommended.

It is unnecessary to examine the different theories of asphyxia, for all are agreed that it is the absence of the oxygen of the air that deprives the blood of the power to effect the contractions of the heart: indeed none of the theories satisfactorily explain how the application of air to the blood in the lungs promotes the flow of blood in those parts; the fact is known, and the artificial application of air is very naturally suggested, to supply the deficiency. But is the usual mode of its supply supported by any satisfactory results? And do not the experiments that have been made with it, prove that it is a process positively injurious and hazardous to life? Munroe, a number of years since, directed the drowned to be treated by throwing into the lungs as much air as could be done by one operation of a common bellows, without reflecting that the extremely delicate structure of the air vesicles of the lungs might cause them to burst in the operation; and all pneumatic operators from his time to the present day attempt thus to distend the lungs—a course of proceeding the very reverse of natural inspiration, which is effected by the expansion of the chest, the formation of a vacuum, and the passage of air to fill up the deficiency. That no benefits have resulted from the practice of artificial insufflation is the opinion of many experienced persons, and actual experiments have proved it to be decidedly injurious, if not destructive to life.

Struve, in his excellent "Practical Essay on the Art of Recovering Suspended Animation," published in 1797, remarks that the inflation of the lungs is in general prejudicial, and as the operation is attended with great difficulty, it can scarcely be recommended to any other than a medical man. He quotes also, the opinion of Professor Vogel of Rostock: "I, for my part, expect very little success from the introduction of air into the lungs; and I am of opinion that by the general method of proceeding, little or no air will react on this organ, and even if it does, I never could perceive the least expiration of it, nor any motion of the thorax." Struve also mentions the case of a person drowned, in whom the signs of life were perceptible, but whose recovery was prevented by continuing the operation of inflation. Since that period, we have the testimony of Majendie, as to the results of this practice. He states, that from the records kept in the city of Paris of the effects of the various measures adopted for the recovery of the drowned, the decrease of the number restored to life has been coincident with the greater prevalence of the practice of insufflation. That forcible insufflation will itself produce death, has been proved by the experiments of M. Leroy d'Etoilles, in Paris, in the year 1826. Rabbits, dogs, and sheep were repeatedly subjected by him to the experiment, and it was found that the functions of the lungs were quickly destroyed by this process. The lungs of the sheep approach very nearly in volume to those of men, and the following experiment was four times tried on that animal, with a similar result. An incision was made in the trachea and a tube secured in the opening; air was forced from the mouth into the lungs, when the tube was withdrawn. The animal became convulsed, and the pulse ceased to beat in five minutes. In three others, the insufflation was performed less rapidly, and death did not take place in fifteen minutes. In some of those cases the air-cells

were ruptured and a communication between them and the cavity of the chest, even established through the pleura. The sudden death of these animals was evidently not caused by the mere introduction of carbonized air from the experimenter's lungs, for when the same quantity was blown in slowly, the animal did not appear to suffer any inconvenience. These experiments were repeated by Majendie upon human corpses, and were followed by rupture of the air-cells, air in the cavities of the pleura, and in some instances bubbles of air were found in different parts of the sanguiferous system.

An instance of the injurious effects of forcible insufflation performed by the mouth, is given by Dr. Eberle in his work upon children, occurring when this means was resorted to for the purpose of establishing respiration in a new-born infant, but which in this instance was not successful. A tumor appeared over one of the clavicles, which, on examination, proved to have arisen from the rupture of the air-cells of a portion of the lungs; the emphysema extending over a considerable portion of the surface of the pleura.

From these important facts is it not evident that the method usually recommended both for professional and popular use, of attempting to inflate the lungs with a pair of bellows is one of extreme hazard if not of positive injury, and calculated in the hands of inexperienced persons to produce irremediable and fatal consequences? If when performed by professed surgeons it is regarded as an operation of great delicacy and extreme caution—so much so that its proper management has led to the construction of a graduated scale upon the handles of a bellows made expressly for such a purpose—what are we to expect when any of the accidental bystanders undertake to blow up the lungs with a pair of common fire-bellows?

To induce respiration, modern science will furnish us with an agent by which we may be able to imitate nature in producing the proper movements of the respiratory muscles; and thus, by the vacuum within and the atmospheric pressure from without, the respiratory process may be imitated without the rough usage of forcing air into the lungs in a mode the very opposite to the provisions of the system. Electro-magnetism offers the only means whereby an action of these muscles may be induced. The compact and convenient arrangement of the powerful instruments for applying this agent, puts it in the power of every medical man to be as ready to render assistance with as much promptness in cases of asphyxia as he usually is in any other species of accident. It is an interesting subject, and it is hoped will meet with attention commensurate with its importance.

It appears to have been a common error to regard all cases of asphyxia from whatever causes they may have arisen as identical, from the fact that a deprivation of air occurs as a cause in them all; and hence a common treatment, with but little modification, has been recommended for every case. The deprivation of atmospheric air, although the cause of that state now known as asphyxia, is yet attended with particular circumstances in different instances which very essentially modify the condition of the body, and consequently demands some modification in the treatment. The state of the body of a person who has met his death by hanging is very different from that of one who has been drowned. There is a great difference between such as are suffocated by a closure of the trachea, the inhaling of deleterious gases, &c., and such as are drowned.

The body in the former case retains its heat for a long time—much longer than usual:—while in the latter a remarkable coldness and contraction of the surface are its characteristic condition in an exceedingly short time after submersion; the surface also is much paler, showing that the blood has left the smaller vessels of the skin. Although exhibiting a general correspondence in the state of the internal organs, there is yet a greater degree of congestion of these parts in the drowned, and the larger blood-vessels are more loaded than in those who have been hung. The surface of the body also of those who have died from inhaling noxious gases retains its heat for a much longer time. We should avail ourselves of these important facts as indications of some modification in the treatment to be adopted in the respective cases, and not draw our inferences from experiments that can scarcely be regarded as parallel. From certain experiments upon reptiles it has been inferred that it is hazardous in cases of asphyxia to apply heat. Reptiles highly tenacious of life have been stifled by having a moistened bladder fixed tightly over the mouth; others have been deprived of the heart; and in these conditions immersed in warm water, and when apparently dead have been revived by being taken out and exposed to the vivifying influence of the cool air. Hence it has been asserted that warmth is injurious to asphyxiated individuals without making any distinction as to the cause which produced this state. It is evident, however, that these cases do not afford an illustration of the case of a drowned person, for in him the minute circulation of the surface is arrested and the blood is forced to the interior; while in the experiments just mentioned and also in parallel cases of accidental asphyxia, the blood still remains in the smaller vessels of the skin, and for the short time that life continues, actually becomes a species of substitute for the blood which should circulate through the lungs, and the cool oxygenated air produces a limited influence through the medium of skin, and the combined influence of these stimuli will tend to excite a movement in the fluids contained in the capillaries. To make the experiment applicable to the case of a drowned person, the surface of the body of a warm-blooded animal should, at the moment it is asphyxiated, be cooled 30° or 40° below its ordinary temperature; with this additional cause of suspended animation, a very essential difference in the treatment to resuscitate the animal is evidently required. It must be evident in the case of the drowned that it would be improper to expose the body to the cold air, as this must, under the peculiar condition of the body, act as a sedative to the nerves and capillaries of the surface, and upon no recognized principle can it be regarded as a restorative measure. Warmth is the only mode by which the nerves of the surface and the capillaries can be brought into action and the internal congestion relieved.

One of the most prominent facts connected with drowning under ordinary circumstances is the rapid abstraction of the heat of the body by the dense fluid by which it is surrounded; effected by the comparative coldness of the water, its great amount which allows of not a momentary cessation in the universal tendency to an equilibrium, and the suspension of vital action which occurs on the arrest of respiration. It has been proved that the living, breathing body immersed in the sea at the temperature of 44° loses about 15° in a minute and a half; it cannot, however, be reduced any lower. Now if respiration ceases and the functions of vitality are suspended, there is no supply of animal heat, and its abstraction must then proceed without anything to arrest it until the body

is of the same temperature as the water. The ordinary temperature of the water of the Hudson is about 40° below that of the human body, and every one knows, who has been present when a body has been taken out of the water which has been seen to fall in, what a rapid reduction of temperature has taken place. An extreme coldness is always a marked condition of the bodies of the drowned, an evidence both of the arrest of circulation, the loss of nervous power, and the consequent destruction of vital action.

Those animals which produce the most heat, as man, live the shortest time when submerged; it therefore appears to be the most rational course to restore the heat which is so necessary for him, as quickly as it can be done. Heat is the first thing required to excite vitality; and a principal cause of the want of success in the attempts at resuscitation, I am satisfied is the neglect to warm the body, which, together with the rough and unnatural usage which it often receives, quickly exhausts the remains of life.

The influence of temperature in the direct effect it produces upon the nervous system independently of the circulation, has been proved by the experiments of Dr. W. F. Edwards, detailed in his work on the influence of physical agents on life. The powerful effects of the same agent in restoring vital action has been very curiously illustrated under entirely different circumstances—where the depression of vital power occurred from inanition. These experiments are given in an essay by Dr. Chossart, which received the prize of the French Academy of Sciences. They prove that heat alone is a very powerful means of restoration under that condition of the system which exists immediately before death from starvation. Several small animals, such as pigeons, turtle-doves, etc., were starved until death was so near that several of them died while the heater was preparing to receive them. In this state their temperature was found to be greatly reduced, and the result of the application of artificial heat was in general to restore those yet alive, from a state of insensibility and want of muscular power, to a condition of comparative activity; their temperature arose, their muscular power returned, they flew about the room and took food when it was presented to them. Warmth alone, it is well known, will restore animation to insects when drowned.

As far, therefore, as actual experiment has been able to prove the effects of heat upon animal life, it is clearly evident that it is the most active agent in the restoration of vital action, the loss or depression of which is invariably connected with a greater or less degree of depression of temperature. When from any cause the natural evolution of animal heat is arrested, the application of artificial heat is evidently the most proper method to be adopted, and it is one to which our instinct prompts us. Why then should the actual condition and wants of the body be so much disregarded, and heat withheld or imperfectly applied under circumstances which demand it most?

The direct establishment of respiration also, by the effect which heat exerts upon the circulation, makes it an important measure in the treatment of the drowned. The immersion of the body in the cold water constricts the small vessels upon the surface, forces the blood into the larger blood-vessels, and crowds the lungs and right side of the heart with blood, which thus mechanically inpedes their proper motion. This state of congestion is momentarily experienced by most persons to a greater or less degree, upon plunging in a cold bath. The operation of heat ap-

plied to the entire surface of the body and limbs, is to unload these crowded parts, and thereby not only afford them an opportunity to act, but by the current produced through the vessels actually commences the process of the circulation of the blood.

I have been induced to make these few remarks from having recently seen the beneficial results of the practice here recommended; indeed, the only successful case out of five or six, in all of which insufflation was practised. The case to which I refer, was that of a child about five years of age, who had fallen in a large covered excavation, containing about four feet of water. When I saw him, he was, to appearance, perfectly dead, without respiration, entirely destitute of pulsation at the wrist, nor could any movement of the heart be detected. The body was very cold, and the limbs hung lifeless, as he was carried by a man to be rolled upon a barrel. I directed him to be wrapped in some warm clothing, first wiping the body dry, and taken to the nearest bed; at the same time I sent a bystander for a blanket and another for some warm water from the first fire where it could be found. All these directions were promptly followed. The child had already been placed in a warm bed, before any of the articles were procured; as soon as they could be used, the body was completely enveloped in the blanket saturated with hot water, when the child made one deep inspiration. A long interval followed, when another inspiration took place; the intervals between the inspirations gradually lessened, until in about an hour the respirations had become regular, but very laborious. The child continued in a state of stupor for about twelve hours; he gradually recovered from this state, when violent reaction occurred to such an extent as to endanger his life, from inflammation of the brain. This state was only subdued by prompt blood-letting, and a week elapsed before the excitement of the circulation was effectually subdued.

In the directions published for the information of such as happen to be present upon taking the body of a drowned person from the water, I would suggest that such only as tend to impart warmth, be the means adopted. The inflation of the lungs, even if it is not positively injurious, is an operation requiring much skill and delicacy, and some amount of anatomical knowledge that cannot be imparted by any popular instruction. The application of heat is one which any person can perform, while professional assistance is sent for. A practice, the very reverse of active measures, almost universally prevails: no attempt, whatever, is made to warm the body, or to do anything else, except, perhaps, rolling it on a barrel, or leaving it exposed in its wet clothes, surrounded by idle spectators, inactive from ignorance of what to do, or from a natural unwillingness to undertake a strictly surgical operation. Let them be instructed to adopt a measure which is evidently founded alike upon common sense and physiological principles, and which is so easy to put in practice; while other measures are left for the professional man. Let them be told that nothing is required of them but the application of warmth, and the careful handling of the body, as is always done in cases of other accidents.

The best method of applying heat is that which can be done with the least delay. Dry heat for various reasons would be decidedly preferable, but I know of no method that could be relied upon to apply heat in this manner, with the necessary promptness. The mode which, under ordinary circumstances, can most readily be put in practice, is to envelope the naked body in a large blanket which has been thoroughly saturated

with hot water, a small quantity of which can always be found where there are any houses; and if it is but a quart it will be sufficient to wet the blanket for all purposes required. As it is always necessary to simplify the directions, so that no confusion or delay may arise from the suggestions of different methods, the object would perhaps be best attained by directing this alone to be done. While, therefore, the body is carefully conveyed, if possible, to a bed, and there divested of its wet clothing, and immediately covered with anything that will prevent the further loss of heat, let some of the bystanders be sent to obtain water from a neighboring fire; then direct a blanket to be wetted with it, and with it cover the entire body and limbs, leaving the head exposed to the cool air. By attending to these simple directions, an invaluable period of time can be improved, and prompt and effective assistance rendered by any one, without the possibility of erring, until the services of a medical man can be obtained.

ART. II.—*On the Pathology of Leucorrhœa, Fluor Albus, or the Whites; with a detail of the opinions relating to it, of some of the most distinguished authors during the last* 170 *years, a notice of the peculiar appearances of the discharge, and an attempt to connect it more directly than has hitherto been generally done, with inflammation of the vagina, cervix, and lining membrane of the uterus. To which are appended, numerous illustrative cases.* By WM. C. ROBERTS, M.D., Fellow of the Coll. Phy. and Surg., Lecturer in the Spring Course of the Assoc. for Med. Instruc. of said College; and formerly Physician to the Northern Dispensary.

THAT the subject of "the Whites" stands in need of some such examination as the present, is abundantly evident from the confused and conflicting accounts which are given of it by many of the standard authorities whose opinions will be cited. The very name of "sexual *weakness*" which has been so generally applied to it, has long tended to mislead the student as to its real nature, and to lead to a mode of treating it, often useless, if not actually injurious. The more accurate views of its pathology which have resulted from the employment of that invaluable instrument in the investigation of uterine diseases, the speculum, render it desirable, also, that these should be presented in all their force under the eye of the profession, in order that the true nature of Leucorrhœa may be ascertained and understood, the use of the speculum upheld, recommended and encouraged, the needless prejudice against it, on the score of indelicacy, overcome, and a better method of cure indicated and adopted. Without the speculum, it is often absolutely impossible either to assign the causes of the discharge, or to apply the appropriate remedies. Something may indeed be accomplished by the simple inspection of the former, and by the touch; but even then, much must remain doubtful, and the treatment be often insufficient and always uncertain. To proceed thus far even, an intimate knowledge of the varieties of discharge which occur in this complaint, and of the various states of the parts upon which they depend, must be possessed, and upon this point we hope to be able to afford a degree of positive assurance, which cannot, as yet, be met with elsewhere. We can safely say, that notwithstanding

the information we may have possessed from reading, we had no practical knowledge of the facts which were developed during the researches on which our remarks are to be founded. We desire, however, in making these observations, that it be clearly understood that we pretend to offer no novelty to the reader, but aim only at putting him in possession of the ideas at present entertained upon the subject, and at corroborating, by the relation of our own experience, views which have elsewhere been expressed, and which appear to us to be the most correct, of its true nature.

We propose to divide our essay into three parts. The first will contain the expressed opinions of some of the leading writers on the subject since the year 1670, with such critical remarks as may suggest themselves on the perusal of each. These we shall arrange in chronological order, and thus will be presented a mass of information on the subject of Leucorrhœal Pathology which, unless we deceive ourselves, the reader will in vain seek to find assembled elsewhere. From this he may select the theory which best accords with his judgment; many sources we must have overlooked, and many have been inaccessible to us, but few of any real merit have, we trust, escaped our notice. In the second part, we shall consider the subject of Leucorrhœal Pathology particularly, especially as it relates to its connexion with certain morbid states of the vagina or uterus, and furnish the result of our observations as to the peculiarities of the discharges which characterize it. In the third, we shall offer a series of cases of the disease, in which the speculum was employed, more numerous, with a single exception hereafter to be noted, than is anywhere upon record; with such remarks as may tend to elucidate the true history of the disease. As we have to do only with *its pathology*, we shall enter into no minute description of the lesions themselves, nor of the treatment which they require, further than is displayed in the recital of the cases themselves.

Part I.—It is customary to commence the pathological history of a disease by a reference to Hippocrates. "The divine old man," say the authors of the Art. Leuc. in the Dict. des Sc. Med., "clearly describes as many as ten sorts of this disease, according to their color; thus he considers, in as many separate paragraphs, white, yellowish, and greenish fluxes, those which resemble the urine of sheep, the whites of eggs, the juice of cooked meat. Aretæus, Alexander Tralles, P. Eginetus, and Oribasius, only just mention it. Aetius divides it into painful and not painful, remarking that the first *was always associated with ulcerations*. Galen treats of it in several places, but does not seem to have written any particular treatise upon it. A clever one upon the subject, which assisted in disencumbering its history from the humoral theories of the Arabs and the explanations of Galen and the chemists, is that of Guy Charleton, published in the 18th century, entitled, "Inquis. Med. Phys. de Caus. Catamenior: necnon uteri rheumatismo, sive fluore albo." This author was deceived by a resemblance which he supposed to exist between chyle and the uterine flux. The most remarkable work we have on catarrhus uterinus, is incontestably the Monog. of Blattin, published in 1802, "Du Cat. Ut. ou des fleurs blanches." It is learned, complete, curious and useful."*

The earliest author whom we shall quote, as an exemplification of the

* This work we have been unable to obtain.

theories and expressions of his time, and in contrast with succeeding opinions, is the very self-complacent Mr. Nicholas Culpeper, whose antique work, "Directions for Midwives, or a Guide for Women, 1676," is curious and entertaining. On p. 2d, lib. 4, sect. 2d, chap. 12, p. 50, "of the Whites," we are told that the immediate cause is an excrementitious humor, phlegm, choler, or melancholy. "It is gathered in the whole body, or in the stomach, liver and spleen. For they who have crudities in the stomach are subject to this disease. Sometimes the womb alone is distempered, after often mischances, or when the womb is very cold and moist. This matter flows through the veins of the womb, or the neck of it, which use to carry blood, and nature abuseth them to carry excrements, especially if they are bred in the womb. If they be not bred in the womb, the humor is from a cacochymy." Mauriceau, in his Tr. des Mal. des femmes grosses, &c., 1721, 6th ed., lib. 3, chap. 22, p. 457, says, "these whites distil from the inner substance of the womb, *and from the same vessels which serve to evacuate the menses.* The principal cause of the whites is not always the womb, for often disordered viscera evacuate their corrupted humors upon this part, which serves as a sewer to the whole female economy; nevertheless, a bad disposition of the womb contributes much to increase this disease, whether because it has suffered some violence in a bad labor, or because there being obstruction to the vessels of this part, which ought to allow the menstrual blood to flow, there oozes from it only the most serous humor, which is changed into the whites." "These," according to the author, "are common in pregnancy, because the menses being suppressed, change into these whites, which then do not flow from the fundus uteri, but only from the vessels which open at its inner orifice (459); a great discharge of them so debilitates the woman, he says, that she is oftenest barren." On p. 461 he tells us that whites "proceed from a great heating of the intestines, and from constipation, which heats the womb, which then draws towards itself much of the superfluous humors of the body." The glorious work of Morgagni would come next in order; but in order to approximate the three specimens of purely humoral and speculative pathology, we shall next cite Astruc, a learned and most elaborate author on the Diseases of Females in his time, whose work is dated 1770 (vol. 2d). "Whites," he says, "are of two kinds: milky and lymphatic." The causes of the first he conceives to be that the milky juice which separates from the vessels of the womb, which must accumulate for a whole month to produce the eruption of the menses, can escape drop by drop from the proper vessels, and thus produce the milky fluor albus, only under the influence of one of three causes. "1st. When it is too abundant and cannot be contained in its vessels, *whose orifices it forces;* 2d. When it is too fluid, and escapes by the orifices of its vessels, otherwise sufficiently closed; 3d. When the orifices of the vessels are too open, or too easy to be opened, and thus allow it to escape too easily;" each of which hypotheses he attempts to establish in tedious detail. "In cases which depend on the first order of causes, the humor which flows is white, thick and truly milky, *because it is true milk*, which is only too abundant, &c., &c." The lymphatic whites are due to an escape, from three causes, of the lymph which circulates in the lymphatic vessels moistening the inner surface of the womb. The discharge is yellow, or green, acrid, fetid and corrosive, when the milky juice or lymph is mingled with bile, or a few drops of blood. Ulcers of the womb, according to Astruc, are a solution of con-

tinuity, or laceration of the inner surface of the womb, not recent, whence flows pus, or at least a purulent serosity (310), which is white, ashy, green, yellow, according to circumstances. These ulcerations, which, though possible, are purely hypothetical, may arise, he says, from very acrid and inveterate leucorrhœa, which first relaxes and then excoriates the womb. In the three quotations now made, we see the false pride of ignorance and the delusiveness of hypothesis. There is in the unfounded assertions of these authors, oracles in their day, the germ of errors which are currently perpetuated to the present time, and not one idea which can safely stand the test of truth. We turn with pleasure to the consideration a work which will bear comparison on the subject of leucorrhœal pathology, with any one of our own time, and affords information extraordinarily accurate and valuable. It is surprising that this book was overlooked by Astruc, and that we do not find its contents noted by any author whom we have consulted, prior to the year 1818. (See the cit. from the Dict. des Sc. Med. post.) Morgagni, de Sedibus et Causis Morborum, was published in 1760. We quote from Cooke's abridgment, Phila., vol. i., p. 403. The first passage which we shall transcribe contains a fact which has hitherto escaped notice, and displays an early knowledge and use of the speculum, a very ancient instrument happily recently revived in the investigation of uterine disease. "The os uteri will not only admit of being felt with the finger, *but it may be brought into view by means of a speculum*, or even without it, especially if the vagina is short, *by introducing an ivory or crystal funnel of a proper length and breadth*, and, if necessary, employing a light. *In this way I have seen the os uteri more than once.*" It is much to be regretted that Morgagni did not pursue the opportunities of examination which were thus opened to his view. "Organic lesions producing mucous and serous discharges."—Leucorrhœa—is the heading of p. 409. "Generally," says Morgagni, "*the uterus is the source of fluor albus.* Pus is discharged when ulceration has taken place either in the uterus, or vagina. *Serum, or a variously colored secretion, is usually secreted when the inner membrane of the uterus*, like that of the nostril in coryza, may be affected with a kind of rheuma." The reader will note the accuracy of the underscored passages.

The 17th case is that of a maiden of 16, who had leucorrhœa. The orifice of the vagina and hymen was red, inclining to blackness, and the vagina was, in some parts, gangrenous. The uterus was small and thin; the upper part of the fundus, *on its inner surface*, was universally reddened by distended blood-vessels. "When I had wiped from the os uteri and the cervix, the mucus which we find there in a natural state, and then compressed the inferior part of the fundus, the cervix and corona of the os, I observed whitish matter of rather thick consistence, proceed from all these places in a regular manner, *which clearly demonstrated whence the leucorrhœa had originated*" (xlvii., 12). In a woman who had been affected with leucorrhœa, *the vagina was found red*, the os uteri very large, and *the inner surface of the uterus unusually vascular.* The vagina and cervix were smeared over with a *thick white* discharge. "I imagined that this state resembles that which would be found in the Schneiderian membrane after coryza," p. 412.

Case 18. "*The cavity of the uterus* was filled with a humid secretion of a white color, *but inclining to a yellowish or greenish hue.* And when the fluid was wiped off, *the inner surface of the uterus*, in several places

exhibited *small whitish tubercles. The orifice of the uterus*, as well as the hymen and vagina *were inflamed.*" (413.)

Case 19. "The color *of the inner surface of the fundus uteri was nearly that of blood, and the corona osculi* (circumference of the os) had almost the same appearance, though with a greater tendency to blackness. From the os and cervix a thick and almost puriform mucus issued." "In a maiden whose vagina was moistened by a rather white and thickish matter, the dissection of the upper parts demonstrated that the secretion must have taken place from the corona of the os and cervix, or vagina, from *vesicles* which are sometimes prominent there, containing in health nothing but a limpid mucus, but separating, in consequence of disease, a different matter, sometimes opaque, and rather thick, and occasionally even watery," p. 414. Query—Is not this the granular inflammation of Boivin and Dugès? "In a case where the cavity of the fundus contained a spoonful of yellow serum, *the whole upper part of the cavity of the fundus*, but especially its posterior surface, was tinged of a reddish black." (Ep. 47, 16.) We have in these interesting passages the pathology of uterine leucorrhœa set forth by the aid of morbid anatomy, in a manner to which modern investigation can add nothing, and from which it can take nothing away. It is strange that the facts thus precisely stated by Morgagni should so long have remained unnoticed by subsequent writers. The enlargement of the neck from congestion, and its superficial ulceration, escaped his notice, which would not have been the case had the speculum been oftener applied.

Manning's Treatise on Female Diseases, 1775, is an agreeably written, and for the most part judicious and useful work; but his theory of the proximate cause of Leucorrhœa is unfortunately only the expression of antiquated and erroneous doctrines, not wholly exploded even at the present day. "The proximate cause," he says, "is a redundancy of serous humors, and a *relaxation* of the uterine vessels." (p. 162.) Some causes *weaken* the uterus by occasioning a greater derivation of fluids towards it, with relaxation of vessels, obstruction of circulation, and escape of the thinner parts of the accumulated fluids by the distended lateral ducts. (167.) Elsewhere he as gratuitously speaks of the extreme orifices of the vessels being relaxed and weakened by being violently stretched, as in hard labor. Purging, issues, emetics, astringents, chalybeates, balsamic injections and fumigations, cold bathing, and regimen, constituted, as now, the method of treatment. With whom the theory of weakened and relaxed vessels originated, we cannot determine. We find it here asserted, and it has been handed down almost uncontradicted until our own time. But the progress of modern science will, it is hoped, dispel these errors, and make amends for the past. Clogged with further faults, we find the doctrine inculcated by Leake, in a work of merit, but displaying a good deal of personal ostentation, and partly intended for the general reader.—"Pract. obs. towards the prevention and cure of the chronic diseases peculiar to women, 7th ed., 1792." "Fluor albus," he observes, "proceeds from the vessels subservient to menstruation, sometimes coming from the mucous glands of the womb and sometimes from the vagina." (Vol. i., p. 100.) "It may be distinguished," he says, "into two kinds; the first arising from *simple weakness and relaxation of the solids*, which may be general or partial; the second from *a vitiated and impure* blood, when the body is loaded with *gross humors* (how often do we hear these expressions at the present

day) which nature, for her security and relief, thus endeavors to carry off." (p. 102.) "It often," he says, "produces ulceration of the womb, bearing down, barrenness, dropsy or consumption." (107.) Again he tells us that "it most commonly arises from *relaxation and bodily* weakness" (108), a view which we shall show to be in part taken in late works of standard authority. Dr. Leake's treatment, though he is not explicit, is essentially tonic. Dr. A. Hamilton's sketchy production, intended, as he says, as a guide to midwives, but dignified with the title of "a Treatise on the management of female complaints (Ed. 1813), gives rather an improved view of the subject of "Sexual Weakness," which occupies four scanty pages. (sect. ix., p. 37.) He has more accurately noticed the characters of the discharge than his predecessors. "If," says he, "the color be greenish, or pale yellow, the disease is to be attributed to *some disordered action* of the glands in the passage to the womb, or the womb itself, the effect of local irritation or general fullness." A mild antiphlogistic treatment is recommended. "A pretty common variety of the disease," says Dr. H., p. 40, "consists in a thin, greenish or bluish discharge, &c.," tending to weaken the constitution, and for which all kinds of tonic and alterative remedies are recommended. But the observations are throughout too deficient in precision, to serve any useful purpose. "Some women have the discharge, for a day or two, of a fluid resembling transparent jelly, about the middle of the menstrual interval, the effect of imperfect menstruation." A circumstance which we have never heard complained of, and for which internal means, together with a course of Bath or Bristol waters, and mercurials, are advised by the author.

We come next to a work which marks an era in uterine pathology, upon which it is even now a standard authority, and which is among the first to attach any correct idea of cause to the various forms of leucorrhœal discharge; we mean the "treatise on the Dis. of females attended with discharges, by Sir C. M. Clarke, Lond., 1st ed., 1814." Sir C. C. begins by informing us that Sydenham considers the "fluor muliebris" to depend upon debility, and to be allied to Diabetes. (Epist. de morb. Epid. ab anno 1675 ad ann. 1680). Mead (Mon: et Precept, cap. 19, sect. 3) says, "Hunc autem humorem modo profundunt *canales uterini*, modo *ex glandis* quibus consita est vagina, erumpit. In utraque mali specie, corporis habitus præcipue habenda ex ratio; *ab illius enim vitio* tam hic quam iste morbus originem trahit." Cullen (Pract.) informs us that "serous and puriform discharges from the vagina may proceed from various causes, not yet well ascertained. Leucorrhœa generally depends upon *a great loss of tone* in the vessels of the uterus." Denman's opinion we shall give elsewhere. Heberden, in the 41st chap. of his Commentaries, says, "aquæ similis, interdum tamen glutinosum est et coloris subflavi, enim subviridus, et mali odoris, atque tam acris," &c. The term "sexual weakness," employed by Dr. Hamilton, "deserves," says Clarke, vol. i., p. 31, "particularly to be reprobated." Vaginal discharge, he wishes to have considered "as a symptom and not treated as a disease," and he defines Leucorrhœa as a "discharge from the vagina, varying in consistence, quantity and color; either produced by a *weakness of the constitution*, or by a change in the structure, position or action of the neighboring parts, such change being the effect of natural or morbid causes." Discharge from the vagina, he arranges under five heads. 1st. Transparent mucus. 2d. White mucus. 3d. Watery. 4th. Purulent.

5th. Sanguineous. With the third and fifth of these divisions we have nothing to do. The first is gelatinous, nearly transparent and susceptible of coagulation. The second or white mucus (which is the same as that which we shall call *amyloid*) is opake, perfectly white, resembling in consistence a mixture of starch and water made without heat, or thin cream, easily washed from the finger, readily diffusible through water (a diagnostic fact upon which Dr. Ashwell lays great stress), rendering it turbid. "A morbid state of the glands in the cervix uteri probably gives rise to this discharge," p. 36. The purulent discharge means that of a fluid resembling pus secreted by the surface of an ulcer, respecting which we shall hereafter have something to remark. "The existence of sexual diseases can only be known by an examination per vag., and this should always be proposed and performed whenever there is reason to believe from the symptoms that they depend on any local cause," p. 43. For the remarks of the author on the sympathetic nature of certain phenomena, depending on uterine disease, see p. 2d, and for general arguments in favor of examination, p. 45 and 46, lib. cit. In Procidentia uteri, vesicæ et vaginæ, inversio uteri, hæmorrhoids, ascarides in the rectum and carcinoma of that organ, there exists always a discharge of transparent mucus from the vagina. The 21st chapter is upon the transparent mucous discharge from the vagina, *not* accompanied by any alteration of structure of the sexual organs; the first form arising from, and accompanied by, increased action of the vessels of the part (a rather nice distinction), the 2d, that which arises from debility. Without pretending to deny the existence of such cases, the discharge of the natural mucus of the vagina from mere debility, or in such quantities as to produce evil effects, must, we apprehend, be very rare: respecting the first form, from not using the speculum, the information of the author is deficient. The 22d chapter is devoted to a consideration of the transparent mucous discharge which depends on constitutional debility, or more properly speaking, according to the views of the author, produces extreme debility, for it is to the discharge that he refers the symptoms. The quantity and consistence, he says, are very various, sometimes liquid, at others, ropy. These cases are much better described by Marshall Hall (Obs. on certain dis. pec. to females, &c.) who ascribes the constitutional state to other causes. With all due deference to Dr. C. we think either of these classes of very doubtful authority—but of this anon. On p. 5 of his 2d vol. (1821) we find him treating in extenso of the glutinous white mucous discharge, "which belongs," he says, "*to one morbid state of the uterus only*" (namely, a morbid state, which we shall see that he considers as inflammatory, of the glands of the cervix uteri). "Transparent mucus of the vagina, when entangled with air, looks white and opake, but does not render water turbid." "In many cases the white mucous discharge has the tenacity of glue, and does not flow spontaneously, but remains in the vagina, until in defecation it is squeezed out, and is never met with in larger quantity." Milky discharges probably consist of white mucous discharge, mixed with the transparent mucus of the vagina." "In the greater number of cases of white mucous discharge, few symptoms are produced, but this is not always the case, the patients being attacked by uneasy sensations in the back and lowest part of the abdomen, which gradually becomes converted into pain (increased by riding and defecation, the mucus which adheres to the stools being supposed to come from the anus), irritation about the rectum and bladder, dysmenorrhœa, pain on

touching the cervix uteri, &c." "There is, however, no alteration of the structure of the part (?), no thickening, no peculiar enlargement of the os uteri, no breach of surface (?), the portion of the vagina which is reflected over the cervix uteri possessing its usual smooth and polished state" (p. 12). We see in this passage, forcibly displayed, the want of that further knowledge which the speculum only could have afforded. Dr. C. informs us that he has now "no hesitation in saying that whenever the white mucous discharge is present, there will be found, on examination, a tenderness of the cervix uteri, which will be removed, or relieved, by the mode of treatment hereafter to be mentioned." (ib.) Dr. C. knew very well how the part *felt*, but he lacked the knowledge of how it *looked*. "Here," he elsewhere says, "the complaint consisted *of inflammatory action of the cervix uteri*, accompanied by its constant attendant, the peculiar white discharge" (24). In another place he says, "to return to the subject of *inflammation of the cervix uteri*" (p. 57). "A great point is gained," he adds, "in ascertaining the true nature of this disease, of which the milky discharge is symptomatic, for thereby the practitioner is led to direct such measures as may tend to remove its cause, instead of those astringents too often employed in such cases." The "purulent" discharge is either, according to this author, true pus derived from the mucous membrane of the uterus, or from the vagina (gonorrhœa, on each of which there are chapters); but he seems to have had no knowledge of, nor does he allude to that variety of leucorrhœal discharge which is of a yellowish or greenish color, depending equally on inflammation of the os and cervix, not specific, so often, erroneously, as we conceive, designated by this appellation. With him "ulceration" of the os and cervix refers only to the corroding ulcer and carcinoma. Thus, though, in this valuable work, much useful light is thrown upon the causes of certain forms of leucorrhœal discharge, much is omitted that is now known to constitute an important feature in the pathology of the affection, which the sense of sight alone could reveal. To strictly uterine leucorrhœa of the inflammatory kind, there is hardly an allusion. Dr. C. seems to have had no suspicion, that his "transparent mucus," or any other, came from thence, for with him all are "vaginal," and he evidently confounds the two when speaking of the white mucus alone. The inference in favor of the speculum and of further investigation is obvious.

Next in succession is the article in the Dict. des Sc. Med. (1818, vol. 18) by Pinel and Bricheteau. They very correctly observe that "it sometimes depends upon a chronic or acute phlegmasia;" and less correctly add "sometimes on a profound asthenia of the organism, and upon the venereal virus." "It is," say these authors, "in the symptomatic and other analogous lesions, that we must seek the proximate causes of the uterine catarrh; they are the sources of these fluxions, these mobile or metastatic irritations, which affect such or such organ, according to its greater predisposition to disease." The product, they say, of all these causes, "is *irritation and hypersecretion of the vaginal and uterine mucous membrane* often allied to an inflammation of these parts;" but, "in many cases also, absolutely independent of it. Thus we admit an active and a passive leucorrhœa." Accurate autopsic observations made first by Bonetus, Dolfus, Boehmer, Morgagni, and subsequently by others, have proved that leucorrhœa had *exclusively* its seat in the mucous membrane of the womb and vagina, and sometimes also in that of the fallopian tubes.

The vaginal and uterine membrane may be affected in its whole extent, or partially. Blattin found that of twenty-four women, the seat of the disease in thirteen, was the neck of the uterus and vagina; in nine, the womb, and in two, the tubes. According to the combined observations of Morgagni, and several others, the alterations of tissue proper to leucorrhœa are resolvable into swelling and thickening, more or less considerable, of the utero-vaginal mucous membrane, with varying changes in its texture. The os tincæ is generally dilated, reddish, swollen and varicose. The uterine membrane is also soft, puffy and villous, its vessels in certain cases much dilated and varicose. Boehmer found the interior of the womb and vagina of a woman, dying with leucorrhœa, covered with a thick yellowish mucus, the tissue of the membrane soft, porous, tumid, inflamed, and here and there ulcerated." "Blattin," they say, "examined attentively the color of the 'whites' in twenty-two women afflicted with it. Twelve passed, per vaginam, a greenish mucus, six had a white discharge; in the other four it was yellowish, blackish, or bluish. The color varied according to the intensity and chronicity of the inflammation." We learn from the preceding extracts that these authors, adopting the pathology of Morgagni, inculcated a very correct idea of the true nature of one form at least of this affection, though still adhering to the old theory of debility to account for the other.

Denman (Introd. Francis, ed. 1829) says that leucorrhœa "is generally a symptom of some local disease," and so far, well; and also "a consequence of *great debility of the constitution*" (p. 173). He recognizes its two varieties, vaginal and uterine, and speaks of its being local and arising from a *relaxation* of the orifices by which a necessary mucus is discharged on particular occasions" (174). Dr. Francis, in a note, speaks of irritation of the inner surface of the organ exciting increased action and discharge. In Dr. Good's elaborate "Study of Medicine," 1829, the nature of leucorrhœa is slightly alluded to, as uncleanliness, the lodgment of some portion of white menstrual flux, or other irritating material, in the vagina, irritation of the vagina, debility and relaxation, produced by a severe labor or miscarriage."

The view of leucorrhœal pathology taken by Lagneau in his article in the Dict. de Med., vol. 13, Paris, 1825 (1 ed.), is remarkably accurate. He defines it to be "a mucous flux, &c., determined by the more or less acute *irritation or inflammation of the internal membrane of the vagina and cavity of the uterus*, and sometimes even of that of the tubes." "Sometimes the discharge is transparent like the white of eggs; at others it is of a milky white; often it is yellowish, more or less green, and sometimes reddish, or of a slightly blackish tint. Sometimes it is serous and abundant; oftenest it is found viscid like the albumen of the egg, which has undergone a commencement of coction; it has the appearance of cream; sometimes it escapes in large flakes of thick mucus; it has also been seen to resemble true pus. Hence all are now perfectly convinced that it is only *the product of a more or less inflammatory irritation of the membrane which lines the vagina, uterus and tubes;* which idea, an attentive examination of these organs sufficiently attests. In fact their interior is then usually found tumid, furrowed by varicose vessels, sprinkled with tubercles or granulations, which are due only to exaltation of the vital properties of the mucous follicles of the inflamed membrane. It is also spread with a more or less viscid mucus, differently colored, sometimes rather odorous, and in certain cases, patches more or less brown, as if gangrenous, and at other times true ulcerations, have

been observed upon them." It is difficult to improve upon this condensed general view of this point of pathological inquiry.*

The second edition of the work of our late distinguished countryman, Dr. Dewees, of Philadelphia, was published in 1829. In it, we find him asserting that leucorrhœa, "even at the present day, is ranked by many among the *opprobria medicorum*." He divides it into the *inflammatory*, acute and chronic, or gleety, that of remote or indirect irritation (sympathetic), and that of habit. Under the first head are included all such instances of the disease as follow an *active inflammation of the mucuos membrane of the uterus or vagina*, produced by some local cause, *or from simple inflammation of the parts* (219)." He quotes Gardien as saying "that acute uterine catarrh is a purely local affection, depending on a peculiar irritation of the genital organs." It offers four periods: in the first the discharge is serous; in the second, greenish or yellow, becoming in the third, thicker, and offering shades of color, until it grows entirely white, when it diminishes. The fourth period, which forms the passage to the chronic state, presents many irregularities, the disease disappearing for some time and returning without obvious cause. That of which the matter is flocculent, or resembles gluey threads or jelly, is most commonly difficult of cure" (Mal. des femmes). Dr. Dewees is of opinion that the disease rarely proceeds from the cavity of the uterus, even in its most aggravated forms (p. 222), an erroneous idea which a few examinations with the speculum, had he been familiar with its use, would have dispelled; but with infinite propriety he disputes (and he is the first to do so distinctly, nor have many followed his example) Cullen's theory that it proceeds from "weakness of the vessels," adding that "Dr. Cullen does not stand alone in this assumption, for most of the writers have yielded to the same erroneous opinion; thus Chambon, Denman, Leake, Vigarous, Gardien, Capuron, Burns, &c., all talk of debility, either local or general, as the cause of leucorrhœa. Even Mr. Clarke joins in the same belief." Dr. D. next cites John Hunter's opinion that "weakness gives us no idea of a disease," and his remark that "when the expression is applied to animals performing an uncommon or additional action, I do not understand it." (Treat. on Gleet.) Dr. D., however, acknowledges that from excess of quantity or peculiarity of quality, the system frequently becomes involved. "The physician," he says, "will find it best to be very particular in his inquiries respecting the quantity and appearance of the discharge, as by them alone he can determine the actual state of the disease (p. 230)." The following passages contain Dr. D.'s view of the pathology of the disease, which he understood much more correctly than most of his predecessors, and the accuracy of which, the aid of "ocular demonstration," as our cases will show, has abundantly confirmed. "It may appear a gratuitous assumption to those who make leucorrhœa consist solely in a weakness of the uterus and vagina, to declare that, in the first stage of this complaint, *an inflammation really exists in the neck of this organ. But such is the fact*, at least so far as certain phenomena, without the aid of ocular demonstration, will warrant such a conclusion" (231). "We declare, that until it becomes the leucorrhœa of habit, *local inflammation is always present*, and that with this state of the neck of the uterus, the system sometimes sympathizes so much, as to require depletion" (235). For

* The new edition of the Dict. de Med., we have been unable to obtain for notice

want of more accurate knowledge, the inflammation of the uterine mucous membrane is not here alluded to. "In the second stage, the character of the fluor albus, which is more abundant, is changed; it is now of a deep white or yellowish color, resembling thick cream which has stood some time. This stage consists of *an extension of the inflammation* with which the first stage commenced. It has now spread to the vagina, the surface of which, at this time, principally furnishes the fluid discharged" (237). The inaccuracy of this latter statement we shall hereafter show. "In the third stage, there is aggravation of inflammation and symptoms, and the discharge is of a greenish color and frequently tinged with blood." M. Capuron (Tr. des Mal. des femmes, Brux., 1833) asserts most correctly, that "this disease is nothing more than *a chronic or acute inflammation of the mucous membrane* which lines the interior of the uterus and vagina" (72). But unfortunately, he tells us elsewhere, that "chronic leucorrhœa is purely local, and depends wholly on *atony* of the uterine system (74), on diminution in the vital properties of the mucous membrane which lines these organs" (74), and that when leucorrhœa is chronic, it depends on general feebleness of the woman, or atony of the uterus" (76). Thus is the statement made in the first extract directly contradicted, and the old error perpetuated and reproduced.

In the elaborate work of the late Dr. D. D. Davis, of London, entitled the Principles and Practice of Obstetric Medicine (1832), which, though faulty in minuteness of detail and turgidity of style, abounds nevertheless in interest and instruction, and is most ample in references, is a long article, in which the "proximate cause or causes of leucorrhœa" are thus summarily dismissed; "they are, in common with those of most other diseases, involved in much obscurity. They must, of course, consist in morbid actions of the muciparous glands, exhalent arteries, and possibly of some other primary tissues of the mucous membranes concerned in their production." His account of the state of parts relatively to the pathology of "uterine and vaginal catarrh" is taken from Morgagni and Blattin. The following remark appears to belong to the author himself. "The orifice of the uterus is found, *even in the simplest cases of uterine catarrh*, to be in a state of more than ordinary devolopment. Its lips are also frequently felt to be unusually prominent and elongated. *If inspected through a speculum, they may sometimes be seen much swollen, tinged with red blood*, and the seat of varicose enlargement of their veins." (351.) At p. 352 we are told that "the principal morbid condition of production of discharge *is an inflammation of the uterus*, with or without a state of great relaxation of its tissues, *and an analogous affection of the mucous membrane of the vagina*;" but, except in cases of highly acute forms of the disease, we do not find this principle applied to practice, nor any notice taken by Dr. D. of the treatment of the local lesions, evident upon ocular inspection. The old treatment by tonics and astringents is elaborately detailed and recommended. It cannot be denied, however, from the perusal of the extracts above made, that Dr. D. possessed a correct, though somewhat limited view of the true pathology of this affection.

Dr. Gooch, in his Lectures on Midwifery, Am. Ed., 1832, p. 44, acknowledges the distinction between uterine and vaginal leucorrhœa, but is wholly silent as to its pathology. "The treatment," he says, "is to a great extent empirical."

The article "Leucorrhée," in the Dic. de Med. et Chir. prat., Paris, 1834, is very brief and from the pen of Dugès. "True, or essential leu-

corrhœas consist," he says, "only in a certain degree of irritation or inflammation, more or less chronic, of the internal surface of the uterus, and notably of its neck, perhaps only of its mucous follicles, or of the vagina." He makes two varieties: the sub-acute, which is a true inflammation; the chronic or passive, which is an as thenicflux, there being no symptoms of irritation in the womb, and as the discharge is stated to be gluey or lactescent, probably a mere increase of follicular secretion.

The article in the Cyclopedia of Medicine (London, 1834), is from the pen of Dr. Locock, accoucheur to Queen Victoria of England. In it, we are very correctly informed that the leucorrhœa "is looked upon by the patients themselves, as the cause of ill health, or of the symptoms under which they labor; *whereas, in the majority of instances, the discharge itself can only be considered as a symptom, the effect and result of local or general disorder.*" The word "general" is an unfortunate addition. "So many of the vaginal discharges," he continues, "depend upon uterine disorganization, or some alteration of the position of that organ (?) that it is advisable in every case, to make, where possible, a minute examination per vaginam (not per speculum?) so as to ascertain the exact condition." (p. 34, vol. 2d.) The simplest form of leucorrhœa," says Dr. L.," is a mere increase of the natural secretion from the mucous membrane of the vagina, perhaps of that of the uterus and fallopian tubes." This we shall show to be of rare occurrence at all, and seldom unconnected with inflammatory action: mostly, if not always follicular. "Dr. Jewel states his impression to be, that it seldom issues from the uterine cavity, but from the cervix," which, says Dr. L., "is by far the most common form of the complaint," a conclusion, the accuracy of which may be fairly doubted. "In general," says Dr. L., "we shall find great symptoms of debility, accompanying long-continued leucorrhœa, *but the debilityis nearly always the consequence and not the cause of the disease.*" This truth we commend to the notice of the reader. "It is an acknowledged fact," continues Dr. L., "that whenever the general health is broken down and much constitutional weakness occasioned, local disease is often the result." "Besides inflammatory action, acute, chronic, or subacute, a very large proportion of cases of leucorrhœa depends apparently on *irritation*, differing from inflammation, yet easily running on into it." To this statement, as it respects the proportion of cases, our own experience compels us respectfully to dissent. "Purulent discharges from inflammatory action may also take place from the mucous surface of the vagina, independently of gonorrhœa from impure connection, without organic disease, and solely from a diseased condition of the natural secretion of the part" (35). This statement is pathologically inaccurate. "If the purulent discharge depend upon inflammatory action (how else can it occur!) it is not solely to a diseased condition of the natural secretions, but to a true organic disease that its presence must be traced." Such a statement, from such a writer and in such a work, surprises us greatly. "All these forms may end in chronic leucorrhœa, when the discharge is more or less profuse and constant, mucous or purulent, or a mixture of both; it may become green, or offensive, and *yet be the result only of functional disorder*" (p. 36). This statement we believe to be equally unfounded. No allusion is made to the state of parts as seen by the speculum, and the only practical dictum founded upon it is that "if the cervix uteri is particularly affected, leeches may be applied to the os uteri itself," &c. (37.) The reader,

we are sure, will agree with us in considering this view of the pathology of leucorrhœa, as behind that of the age in which it is written.

The "Practical Treatise on the diseases of the uterus" by Boivin and Dugès (we quote from Heming's Translation, London, 1834), chap. 7, p. 381, "of muco-uterine discharges," is, so far as pathology at least is concerned, incomparably the best extant upon the subject of which it treats, and must be considered as the standard with which all past and future volumes must be compared. Accomplished anatomists, veteran practitioners, adepts in touch, and invariably combining with it ocular examination by means of the speculum, which one of the authors has so much contributed to improve and popularize, it is to their work that we must refer for correct ideas as to the real nature of the diseases of the genital apparatus of the female. "With regard to the cervix," say they, "it is well known that it has numerous follicles, and secretes a viscid and abundant mucus in its natural state, and that leucorrhœa is an accompanying symptom of many affections in which the cervix only is diseased. Hence the uterus, and especially its cervix, ought to be considered as the source of most simple leucorrhœal discharges. There are some, however, which proceed in a great measure, if not entirely, from the vagina, or at most from the vagina and os." (384.) "We have arranged it as a form of chronic metritis." (ib.) B. and D. make two forms; subacute, or sthenic and chronic. "The former is really inflammatory; the discharge soon becomes viscid, yellow or yellowish, often greenish, sometimes glairy, sometimes more fluid and puriform, staining the linen with a greenish yellow color as it dries, and imparting to it a degree of stiffness like that of starch. Afterwards it becomes often white and lacteous, sometimes mixed with slimy matter almost transparent, or consisting solely of this matter, resembling the mucus secreted by the pituitary membrane. The inflamed state has then almost entirely subsided. The disease may now become chronic, the color and quantity of the discharge having generally appeared to be more viscid, or high colored, though not always more abundant, in proportion as the inflammation was more acute."

M. Melier (Mem. de la Soc. Roy. de Med.), they say, "is in favor of injections into the uterus, as a means of curing chronic inflammation of the mucous membrane of the interior of the cervix uteri, an affection which he thinks very common, and characterized by redness and swelling of the interior of the os, to which he attributes most cases of sterility, as much in consequence of the obstruction of the cervix, as of the disease being communicated to the ovaria by continuity of tissue." "Although, in many cases, the passive mucous discharge is a consequence of the subacute form, protracted and recurrent, there are, nevertheless, cases in which this *weakness* proceeds originally from relaxation and general debility. (?) When the mucous discharge is abundant, it stiffens the linen as it dries, and generally stains it of a greyish color deepest at its borders."

The 4th chap. is on chronic metritis, congestion and induration, p. 351. "Chronic inflammation assumes different forms, corresponding with its specific causes; these forms are four: congestion, ulceration, granular inflammation and mucous discharge, which are doubtless often combined." "Mucous discharge is frequently absent, and more commonly found in chronic metritis, with, and sometimes without, congestion." (355.) "One of the labia of the os is sometimes alone affected, while the opposite one retains its ordinary firmness and volume." The color is

generally redder than usual in such cases, in the points primarily affected, and so much the more as the inflammation assumes the acute form; a little blood often transudes from these parts, when powerfully compressed by the edge of the speculum, as the finger also recognizes in the examination per vaginam." (356.) Chap. 5, is on "simple ulceration of the os." p. 366. Dupuytren observes (Clin. Lectures), that "the cervix and os being received into the speculum, a superficial ulceration is perceived on one or other of the labia of the os, as red as a cut surface, not deeper than the mucous membrane, resembling the ulceration of the nose, called ozœna, and occasioning, if not removed, fatal results." Jobert observes, that the extent of the ulceration varies from an inch to that of a lentil, in which latter case, usually, several exist, which are often finally joined together "*with*, or without *leucorrhœa*." (368.) Several of the cases detailed by the authors, we shall copy under the second head of our essay. Upon the subject of chronic affections of the organ, the work of Duparcque, a Treatise on functional and organic diseases of the Uterus, Phil., 1837 (translated by Warrington), is able and explicit. Of engorgements, the sanguine, the hard and the inflammatory, none gives a better account, or suggests a more rational method of treatment; but the subject of uterine discharges, hæmorrhagic excepted, has not in an equally direct manner engaged the author's attention. The following passage proclaims at once an important practical truth, while it points out the only method in which this class of diseases can be properly studied and successfully remedied. "I resolved not to give any advice, nor to undertake any treatment of the diseases peculiar to women, without being at the outset assured of the state of that organ, and informed by a scrupulous examination, whether the marked phenomena for which I was consulted, were *essential, or symptomatic* of some affection of the genital organs. It is by pursuing this course, which alone promises results important to science and humanity, that I have been able particularly to declare that *the greatest number of uterine discharges*, usually considered as primary and essential, *are merely symptomatic of a special engorgement either of the whole of the uterus, or affecting the neck alone.*" (104.) Speaking of inflammatory engorgements, he separates the parenchymatous inflammations from that of the serous envelope, and *from that of the mucous membrane which lines the internal surface, and constitutes a peculiar marked character, designated* uterine catarrh," to which, or leucorrhœa, no distinct allusion is made. "As," observes Dr. D., "engorgements, more or less voluminous, may exist without causing discharges, we very naturally conclude that when they do exist, they depend, not on the alteration itself, which, it appears to us, ought rather to suspend those of which the part affected may be the seat, but on accessory circumstances, such as the previous and habitual existence of a vaginitis, or uterine leucorrhœa, or the development of this discharge, which the presence of a tumor resulting from a hard engorgement of the neck would produce upon the vaginal canal." (200.) "Vaginal discharges can furnish no diagnostic signs of the existence and nature of the hard engorgement of the uterus," p. 201. Of primitive ulcerations of the uterus, he makes three forms. 1st, Primitive ulcerations, which are superficial, and without especial engorgements of the tissues they involve. 2nd, Those which have a tendency to extend themselves more deeply, and make indefinite progress, without there being always necessarily a profound engorgement of the tissues in which they occur.

3rd, Primitive ulcerations, with a hard base, more or less thickened, but in general superficial." The following is his description of "simple erosion, ulceration, benign ulcer of the neck." "The ulceration is superficial, and appears only to have destroyed the epithelium, or mucous layer, which covers the neck of the uterus. It may extend superficially to all the surface of the os; sometimes, however, it is less extensive and rather deeper; in all cases, the part which is the seat of it, does not offer any remarkable engorgement, other than the slight one which the inflammation accompanying the ulceration might produce. The edges are slightly prominent, and of a red color, which extends like an areola for half a line or more, gradually decreasing as it spreads; the surface is smooth, covered by a yellowish finely granulated layer, of more or less lively red; a puriform, filamentous and sometimes sanguinolent fluid exudes from its surface. Whenever a woman experiences a troublesome pruritus, burning sensation in the fundus of the vagina, with painful coitus, although menstruation be regular, ulceration may be suspected, and should be tested by the touch and speculum." (340.) The favorite work of Churchill, on the "Diseases of Females, 1839," is perhaps the best compilation in English on the subject, and gives generally a very correct view of the pathology of the disease under consideration. Under the head of "*Vaginal* Leucorrhœa, fluor albus, whites, &c.," he says, that this "inflammation of the mucous membrane of the vagina (vaginitis), has two forms, the acute and chronic. The discharge is at first thin and colorless, becoming whitish or yellowish and much thicker (puriform), resembling cream. The mucous membrane of the vagina is swollen and puffy." "Chronic vaginitis is perhaps the most common of all the diseases to which females are subject." "From the constitutional peculiarities of some patients, and very often induced by the disease itself, *the discharge has been attributed to relaxation and debility.* If, however, the local symptoms be carefully estimated, and their progress retraced, sufficient grounds will, I think, be found, for considering *the local disorder as inflammatory.* The patient complains of a more or less colorless, or whitish discharge from the vagina, of a bland character; in other cases brownish and acrid." C. has a separate chapter on inflammation of the glandular structure of the mucous membrane of the cervix; it is wholly made up from Clarke, and he says nothing of his own respecting it; another from Boivin and Dugès, on granular inflammation of the neck, the usual symptoms of which, he says, are pain and discharge. We incline to think that had Dr. Churchill made a more frequent use of the speculum, in cases which have come under his observation, he would have come to a different conclusion respecting the comparative frequency of uterine and vaginal leucorrhœa, and have pointed out with greater accuracy the kind of discharge which is furnished when the latter exists alone. Puriform discharge from the vagina, except when occurring in cases of true gonorrhœa, is exceedingly rare, and almost always it is the milky white thin fluid which escapes; nor is it this form of leucorrhœa which is generally submitted to the examination of the physician, but that rather, in which the neck and cavity of the uterus are diseased. Nevertheless, Dr. C. has pointed out very plainly, more so than perhaps any of his predecessors, the distinction between the uterine and vaginal forms of the disease (chap. ix., p. 96, Phil. ed.). This distinction, he says truly, as appears from the quotations we have made, had been observed by

Blegny, Morgagni, Baglivi, Manning, Leake, Denman, A. Hamilton, Burns, Nauche, Boivin, d' Espine, and others. The two may be combined. He quotes from Marc d' Espine the speculum appearances, although, as these were made in a venereal hospital, no inference can, he says, be drawn from them as to the nature of the discharge. In most cases it is nearly colorless and transparent, but has been seen brownish or greenish, thin, gelatinous or curdled. "We know," says Dr. C., very justly, "that in many cases of constitutional weakness, the cause must be sought in the inflamed condition of certain organs. In the present instance, this appears to be the case, for if we consider the local distress, the increased secretion, the course of the disease and its remedy, *we can have but little hesitation in attributing all to the effects of inflammatory action, generally sub-acute or chronic, of the mucous membrane lining the uterus.*" The 14th chap., p. 128, is on "simple ulceration of the cervix uteri." The presence of leucorrhœa is uncertain (Jobert); towards the end of the inflammatory stage it may now and then be observed." This statement is in direct contradiction to the results of our own observation. The description of the ulceration is made up from Dupareque, Boivin and Dugès, Lisfranc, and others, and the disease is said to consist of inflammation running into ulceration, not malignant. But the chapter affords no evidence that Dr. C. possesses any personal knowledge of these cases. The well known text book of Dr. Burns of Glasgow, entitled "the Principles of Midwifery, 11th American edition, 1839," is very inexplicit upon the subject of the pathology of Leucorrhœa. "In a diseased state," he says, "the balance between absorption and secretion is disturbed, and the quantity of secretion greatly increased; the discharge, whether proceeding solely from the vagina, or partly also from the womb, receives the name of fluor albus or leucorrhœa." "The discharge itself may consist of the natural mucus of the part, increased in quantity, glairy and transparent, opaque like milk, which is particularly the case when the organs of secretion of the upper part of the vagina and cervix are affected, or it may be purulent." (?) "We also occasionally meet with a discharge like jelly, sometimes turbid, and sometimes clear and amber-colored. It proceeds from the cavity of the uterus, particularly its cervix, and seems to depend on a state produced *by present or previously existing inflammation*" (74). Dr. Burns appears to think that there are cases in which the origins of the nerves influencing the secretion are affected, but he conceives that debility can act only as a predisposing cause. He speaks of a chronic inflammation of the whole uterus, or cervix, with white mucous discharge, which sometimes becomes puriform, and often bloody. The uterus is enlarged, but not indurated; the cervix more or less increased in circumference, and its surface may feel rough, as if abraded (85). "The uterus," he says, "may, *from inflammation*, become ulcerated like any other part, purulent matter is discharged, &c., and sometimes the finger can discover the ulcer. Simple ulceration is very rare, &c." (87). We find in this chapter no allusion to the use or advantages of the speculum, and cannot therefore wonder at the meagreness of its details, nor the inaccuracy of some of its assertions. Another proof is here furnished, that without it, the true pathology and treatment of the disease cannot be understood.

None have, perhaps, written on the subject of uterine diseases from a longer experience, nor in a more practical manner, than the celebrated Professor Lisfranc, of Paris, and from two of his works we shall quote nu-

merous passages which will serve to illustrate amply the pathology of the affection which now engages our attention. In the American reprint of his Lectures (Phil., 1841) we find him saying, that leucorrhœa may without doubt arise, in the first instance, *from the vagina alone*, and extend thence to the uterus, constituting the vagino-uterine catarrh. But after an uncertain period, and sometimes very shortly, *the uterus becomes engorged*, and the catarrh, which was at first the principal affection, *no longer constitutes anything but a secondary symptom.* In many cases, also, the disease pursues a course inverse to what we have mentioned, and *commences by engorgement of the body of the uterus.* The discharge, which arises at first from the mucous membrane of the vagina, does not always come from the same morbid condition of the parts. At an early stage, we find a simple injection of the membrane, with more or less swelling. At a later period we have infiltration, induration and ulcerations of the vagina or neck, and finally vegetations. *From this enumeration it is manifest how necessary it is to explore attentively the vagina, neck and body of the uterus, in cases of whites*, and to regulate by such examination, the essential modifications which the treatment must undergo." After alluding to various methods of treatment, among which are injections into the uterine cavity, he says that "if the disease be kept up by chronic ulcerations, vegetations or engorgements of the uterus, we can only hope to remove the effect radically by acting on the cause which produces it. (112.) "In almost all women affected with abundant discharges from the uterus, *we find the posterior lip of the uterus red;* this state of injection seeming to depend on the contact of the fluid secreted by the uterus, in the same way as the tears cause redness, and even excoriation of the cheek, in epiphora. They are of little importance in themselves, but the mucous membrane may finally become altered, unless the catarrhal state which has given rise to them be attended to." (131.) After speaking of reddish-brown partial elevated injections of the neck, sometimes formed by a network of small vessels, he says, "they are, in all cases, accompanied by simple engorgement of the part, the mucous membrane being soft, thickened, velvety, and bleeding very readily. As these injections sometimes terminate in inflammation, they merit particular attention." "We sometimes see the neck of the uterus marked with small miliary vesicles, discreet or confluent, limited to a part of the neck, or occupying its whole surface. When these vesicles burst, they give rise to small superficial ulcerations which often unite and form excoriated spots of some extent. Sometimes, instead of vesicles, we find pustules of a larger size, in greater or less number, and very similar to apthæ." (132.) "As the lower lip of the mouth is commonest affected, so is the lower lip of the os tincæ. However, ulcerations may exist in other parts: for instance, between the two lips, when they may escape notice unless the precaution is taken to raise up the anterior lip; or higher up, near the cavity of the uterus; in which latter case, their existence can be detected only by the touch. The neck, usually dilated, permits the finger to penetrate, and instead of the polished, serous-like surface of the healthy uterine mucous membrane, we find it thickened and flocculent, and though touched delicately, the finger is often stained with blood." "Ulcers of the uterus are sometimes confined to simple excoriations; at others, they exhibit a slight excavation, and in many cases the mucous membrane being thickened, and the edges swollen and prominent, they appear deeper than they really are. Sometimes the bottom of the ulcer is rough, and

divided by fissures, or, it may be, covered with fleshy granulations, which, in certain cases, assume a fungous appearance, and have been mistaken for carcinoma. It is not always easy to distinguish a simple injection from an excoriation or ulcer. If it bleed, on touching it with lint, it is probably an excoriation or ulcer, which bleeds readily. This always shows that the uterus is gorged with blood. During the epidemic cholera, we had anatomical proof of the simplicity of these ulcerations. Several of our patients died, and the mucous membrane was found red, softened, and a little fungous; the ulceration was superficial, and beneath it, the tissue of the uterus was sometimes superficially affected and soft, at other times perfectly sound." (133.) We now come to notice the great work of this author, entitled, "Clin. Chirurg. de l'Hopital de la Pitié. Paris. 1842. 3 vols. The 2d volume, consisting of 740 pages, is, with the exception of one article, wholly devoted to a consideration of the diseases of the genital organs of the female; and for accuracy of diagnosis and practical detail has few equals and no superior. In the chapter on "Diseases of the Womb and the numerous errors of Diagnosis," we find him stating the well-known fact that the uterus is the focus whence irradiate many painful affections to which the female is liable, and which they attribute to other organs, cautioning us, very justly, on the other hand, against the influence of preconceived ideas, and seeing in everything an affection of the womb. The employment of the touch and the speculum is, in these doubtful cases, indispensable. "A lady had long been affected and uselessly treated for a so called renal pain. The uterus was engorged and slightly eroded. These were cured, and the pain disappeared." (189.) Speaking of fluor albus, he says, "we maintain, and our opinion is based upon thousands of facts, that oftenest the discharge *is only symptomatic, and produced either by an ulceration or by an engorgement of the uterus*, a capital distinction, &c." (207.) "I am convinced that of twenty women affected for at least a month with a free discharge of whites, in eighteen *there exists in the womb or vagina a more or less deep organic affection.* The leucorrhœa, which at first may have been the cause of this affection, becomes its symptom. From the considerations which precede, we conclude that it is indispensable, when rather abundant whites exist, to practise the touch and to apply the speculum, so as to assure oneself of the state of the vagina and uterus, and avoid errors which I see daily committed." (208.)

"Leucorrhœa," says this author (p. 298), "is produced either by an inflammation or by an irritation, or lastly either by an injection or else a sanguineous affluxus seated at once upon the vulva, the vagina, or the inner surface of the uterus or uterine tubes, whence arises a discharge so designated. Leucorrhœa shows itself commonest in the vagina; is least common in the womb and vulva, and is very rarely seen in the tubes. In Paris, London, and many other large towns, it is frequently endemic. One of its most potent causes is the use of coffee and milk. In the number of these must be ranked prominently, erosions, excoriations, and simple ulcerations of the neck of the uterus. In most cases, when these are healed, white discharges disappear, which, previous to cauterization, had resisted every means employed. Engorgements of the uterus are a very frequent cause of leucorrhœa, which ceases only on their disappearance. It may first cause the engorgements, and may afterwards be kept up by them; the latter often occasion it!" (303.) Respecting the pathological anatomy, Lisfranc quotes Bonetus and Morgagni. "I have seen," he says, "sometimes the mucous membrane generally pale, infiltrated, and

offering some indurations. It is not rare to observe an engorgement, either of the neck, or body of the uterus, this pathological state existing at the same time in one or other of these two parts of the organ." Sometimes, he says, the fluid is sero-caseous, like albumen submitted to coction. The mucous membrane secretes a fluid sometimes purulent, sometimes creamy and flocculent; again he says, "whites are sometimes sero-purulent, or sero-sanguineous, and are so little bland that it is very rare not to see the lower part of the vulva and posterior lip of the os tincæ red." The chronic state is either developed primarily, or else is the termination of acute inflammation. The mucous membrane may be pale, white, and, as it were, macerated; it is commonly of a deep red, the os uteri is open and very often engorged." The 3d volume of this work, which, like the 2d, with a single exception, is devoted to the consideration of female diseases, contains a chapter on the "morbid rednesses, pustules, apthæ and granulations which are seated on the neck of the uterus" (p. 518), from which we make the following quotations. "Morbid redness may invade all the neck, or only a greater or less extent of it; it is often seen in isolated patches, now discreet, now confluent, varying in size, number and form. It is commonest on the posterior lip. It is extremely rare not to see it here, when the woman is affected with uterine catarrh, the matter of which is almost constantly in contact with the posterior part of the lower extremity of the uterus. Engorgements of the womb and leucorrhœa are among the causes. They may exist with or without hypertrophy or catarrh of the organ. The symptoms are *inter alias* white discharges in all their varieties; ordinarily they offer slight elevations, as seen by the speculum; if when rubbed, they do not bleed, they are not excoriations. They are either deep or superficial; in the latter case their color is evanescent on pressure, returning immediately on its cessation. They may produce hypertrophy, and when long persistent, ulcerations. They are ordinarily permanent, sometimes fugacious." A common error of diagnosis, according to the author, occurs in this way. The uterus exerts its morbid sympathies on the nervous system, or intestinal canal for instance. The symptoms of an uterine affection are null; the touch imparts no information; but we must not always conclude that the uterus is healthy. We must apply the speculum, "for it is not rare to see upon its lower extremity, excoriations, erosions, superficial ulcerations, or morbid rednesses, which have escaped other means of investigation, and which, misunderstood, continue to exert their injurious influence, sometimes on the functions in general, sometimes on a particular organ. These morbid affections may increase in a more or less latent manner and become at length difficult, if not impossible of cure" (523). Respecting the "pustules" we shall only say that they may cause ulcerations and engorgements; "apthæ" often disappear without causing ulceration. Of "granulations," as the account given by the author does not differ from that elsewhere quoted, we shall not repeat it; they are often accompanied by the symptoms and pathological states of chronic metritis.

The next chapter is upon "ulcers of the womb, not carcinomatous." These solutions of continuity are designated according to the depth to which they affect the tissues, as erosions, excoriations, or ulcerations, deep or superficial. Any part of the neck may be affected by them: enlarging, they sometimes widely involve the vagina. They are sometimes observed in the os tincæ; it is dilated, allows of the introduction of the finger, which finds the mucous membrane not smooth and polished

as usual, but thickened and tomentous; ulcerations, vegetations and indurations are often recognized. The ulcer may be seated on the corresponding surfaces of the lips of the os, which tumefy and elongate much. This can only be seen by pressing between them the closed flat blades of a smooth forceps; when they are opened, their detection is easy. The posterior lip of the os is oftenest affected, for a reason before assigned. These ulcers are single, or multiple, or uniting, constitute but one. Sometimes the epithelium is alone removed; at other times there exists a slight excavation; in other cases, the mucous membrane increases in thickness; the edges of the ulcer are tumid and prominent, it then appears deeper than it really is; it extends sometimes to the tissue of the uterus, which it more or less deeply involves. They are often associated with induration and hypertrophy of the organ of gestation. "In uterine engorgements, the existence of ulceration is the general rule; its absence, the exception" (536). Among the causes, in addition to what have already been named, we find, hypertrophy, simple, or with induration; chronic metritis, leucorrhœa. These ulcerations have sometimes a raspberry aspect; or the surface is "chagrinée" and intersected by fissures; in many cases, it is granulated. Before being wiped, the solution of continuity is greyish: this color is usually succeeded by that of cellular tissue cut and recently inflamed. Fleshy granulations are soon developed in most cases, often becoming luxuriant and soft, bleeding with great facility; at other times hard, growing rapidly and attaining to great size. Sometimes they throw out roots penetrating deeply into the uterine tissue. In dissecting some of these ulcers, we meet with accidental mucous tissue. The surface of the ulcer is then red or greyish, polished, soft and shining as if varnished; it yields an abundant suppuration, sometimes grey, pink, or whitish, capable of so irritating the mucous membrane as to produce a *leucorrhœa* which depends on the presence of the ulcer and is cured with it. The non-carcinomatous ulcer of the uterus either causes, keeps up, or increases hypertrophy; has a slow tendency to heal: is stationary or spreads rapidly; its edges are sometimes everted or bevilled, and it exists with or without hypertrophy of the tissues which surround it (540). Some superficial ulcers bleed easily, even by contact with the air. This shows the womb almost always to be gorged with blood: and occasionally they are followed by a varicose or fungous tumor, which is often fatal (542). On a scrupulously attentive dissection of the neck of the uterus, affected with ulceration, in women who died in the Pitié Hospital of the cholera, the mucous membrane was red, softened, a little thickened and excoriated, the tissue of the uterus beneath was sometimes slightly and very superficially altered and easily torn, at other times perfectly healthy, or only engorged; yet all the symptoms may have been those which characterize cancer (543). Although often latent and insidious, the symptoms of non-cancerous ulcerations of the womb are for the most part marked; among them pain, weight, floodings, *leucorrhœa*, &c., *in a word, all the morbid phenomena occasioned by chronic metritis*, by uterine engorgements not too far degenerated (546). Ulcers of the cervix uteri are sometimes obscured by a tawny pellicle of an albuminous nature, or a thick glairy layer; they must be wiped, in order to establish a certain diagnosis (552). Non-cancerous ulcerations of the neck of the womb almost always get well when suitably treated, and seldom become cancerous. The average period of cure is from three to six months; some, however, are much earlier, or infinitely later

in cicatrizing; although the non-cancerous ulcer of the womb *may* get well without cauterization, as other ulcers do, *they do not do so generally*. "I even assert, that after the many observations I have made for twenty years past, without this cauterization, the cure of these solutions of continuity is very rare." (579.) In concluding this hasty sketch of the pathological observations of M. Lisfranc we have only further to say that the reader will find the treatment, and especially that part of it which consists in the cauterization of the ulcerated surfaces, exposed in this practical volume in full detail.

The contrast between the work just quoted and that which follows, is not to the advantage of the English author. In the "Lectures on the Functions and Diseases of the womb," by Waller (Phila., 1841), a work justly pronounced by the highest medical critical authority extant, to be "meagre and unsatisfactory," we find no separate notice of leucorrhœa, although to the English edition a supplementary chapter on the subject is appended, which not being republished here, we have not seen. It is incidentally mentioned in a section on Inf. of the os and cervix, copied from Dr. Clarke. On the subject of "common ulceration of the os" (p. 47), which is despatched in twelve lines, it is said, "the discharge of the vagina will be mingled with that of the ulcer, whence it appears purulent and bloody. Examination per vaginam in the ordinary manner *will generally discover the nature of the case*, or, you may use the speculum, an instrument of unquestionable utility, but, I think, oftentimes unnecessarily employed. The common method of examination is offensive enough to the feelings of a modest woman, and how much more must that feeling be shocked by *a complete exposure of the person!*" The inaccuracy of the views set forth in this passage, as well as the prejudicial influence on practice which they are calculated to produce, need no comments. The circumstance last italicised is as totally unnecessary as it is to be hoped that it is uncommon. In the New York Medical and Surgical Journal, January, 1841, Dr. Isaac E. Taylor has published a report of cases of female diseases occurring in his service at the City Dispensary. Two of these we shall hereafter mention, as connected with the subject we are now considering. We do not find that Dr. Taylor makes any distinct allusion to leucorrhœa as a symptom of inflammation of the uterus. He has a few lines on "L. vaginal and uterine," in which, however, no mention is made of its proximate cause. "Frequently," he says, "it is owing to catamenial derangement, and in some, the result of debility." In the same number of the same journal, is a paper, which for its extent is one of the most practically useful with which we are acquainted, entitled "Remarks on Engorgement or Congestion of the Cervix Uteri," by Dr. J. C. Beales, of this city. "I trust I shall be excused," says Dr. B., "for more particularly drawing attention to it, as the extreme frequency of its occurrence renders it of importance, and I do not know of any English or American author who has sufficiently noticed it." The history of the disease, as given by the author, is excellent; the speculum receives its proper share of praise; the treatment advised is perfectly appropriate; but no direct allusion is made to the disease being the cause of Leucorrhœa, nor to the fact that the latter is oftenest symptomatic of engorgement. Some of the interesting cases furnished in the essay, we shall hereafter present to the reader.

The article on Leucorrhœa in the Library, or System of Practical Medicine, edited by Dr. Tweedie (Am. Repr., 1841), is from the pen of the

distinguished Dr. Ferguson of London. It consists of much that is unexceptionable, mingled with much that is of doubtful correctness. "In the majority of cases," says Dr. F.," we are of opinion that the seat of the discharge is vaginal." "The forms of Leucorrhœa are either acute or chronic. In the former, the symptoms are those of inflammation of the mucous membrane, pain, heat and swelling; at first a thin exudation like that in common catarrhal inflammation of the Schneiderian membrane, then, thicker, and lastly *purulent;* in the secretion of pus, the pain and swelling abate." "One form of leucorrhœa depends on constitutional causes and local irritability, and there is a reverse state exhibited in the leucorrhœa *of debility;* a 3rd class depends on sympathetic irritation; a 4th class act purely locally, giving rise to irritation and inflammation of the uterine system." This is the only notice of truly inflammatory leucorrhœa, and Dr. Dewees is said to be exclusive in considering all forms of leucorrhœa as reducible to this class. Congestion of the uterus, and chronic metritis with ulceration, are mentioned, but nothing is said as to leucorrhœa being one of their accompaniments: but of suppurative chronic metritis, we are told, "to this form we refer almost all those cases of leucorrhœa in which the discharge proceeds from the mucous membrane of the uterus itself," a very proper and practical admission. Other forms of chronic metritis are mentioned, in all of which, it is said, "the peculiar mucous secretion of the lining membrane and cervix of the organ is increased, and often alters more or less to a purulent character." A very just compliment is paid to the speculum, and we are told (p. 474) that "in no department of practice has the importance of the more accurate pathological views which have been acquired of late years, been more forcibly illustrated than in reference to the present affection, owing to our improved means of diagnosis. The particular forms of leucorrhœa, &c., which occasionally accompany chronic metritis, were *formerly* empirically treated upon some general and common rules, without any regard whatever to the pathological state of the uterus on which they might be dependant." The empiricism here signalized, still, as formerly, exists, and although it undoubtedly contains the essence of a true pathology of the disease which we are now studying, Dr. Ferguson's article is not, we fear, sufficiently precise to indicate it unequivocally to the reader.

"Leucorrhœa," says Dr. Copland, in the great Dictionary which has immortalized his name, and will ever remain a monument of the most indefatigable industry and the most extensive erudition and research (Lon., 1842, part 8), "in every form, and in most of the circumstances in which it occurs, is merely symptomatic either of *functional*, inflammatory, or organic disease of the female organs, *or of disorder of the general health.*" "Leucorrhœa vaginalis is, in the acute form, simple vaginitis. Chronic vaginitis is a most common complaint: it has been very generally viewed as a consequence of *debility*, local or general, of local relaxation. *But a closer attention will often show that the local affection is often the result either of simple or of inflammatory irritation.* There is a more or less colorless, or whitish and bland discharge from the vagina. In some cases, however, it is of a deeper hue, being greenish, yellowish, or brownish, and occasionally, very acrid. On the subject of inflammatory irritation of the mucous glands of the os and cervix, he cites Clark. On the subject of uterine leucorrhœa, he cites the essay of M. Marc d'Espine (Arch. Gen. de Med., Feb., 1836), who examined with the speculum, 193 females.

Unfortunately all these were patients in a venereal hospital, so that many were cases of gonorrhœal and syphilitic origin, and not of simple and benign leucorrhœa. In twenty-three out of 193 cases, the uterine orifice was dry ; in 40 there was only a drop in it ; in 130 the discharge was abundant. In 111 cases, the discharge was in some, aqueous ; of whom, in seven, the orifice was healthy, in three reddish, in one deep red and granulated. In some, it was albuminous and transparent, of whom, in six, the orifice was reddish, in thirty healthy, in six, deep red and granulated. In some it was albuminous, semi-transparent, the discharge streaked blue, gray or yellow, of whom in thirteen the os was healthy, in nineteen reddish, in ten deep red and granulated. In some there was an opake streaked discharge, of whom in three the uterine orifice was healthy, in seven reddish, in six deep red and granulated. " *Acute uterine leucorrhœa is rather hysteritis* with copious discharge from the internal surface of the uterus, than simple uterine leucorrhœa."

This remark is creditable to Dr. Copland's judgment ; less so and savoring of prejudice, rather than a desire to acquire necessary information, is that which follows. He is speaking of chronic uterine leucorrhœa. "The French practitioners and a few British, who delight in the parade of this mode of research, inform us that the speculum shows the cervix uteri pale, slightly rose-colored, deep red or spotted ; yet I suspect that few reflecting physicians will consider themselves much enlightened by the discovery, or will be induced to prescribe according to the shade of color thus detected." This part of the article is mainly a repetition of Churchill. The following passage, we observe with regret. " Probably there are many cases in which inflammatory action truly exists, and others in which *debility*, as respects the state of both the internal surface and the parietes of the organ, performs its part." It is scarcely compensated for, even in some degree, by what follows. " Still I believe that too much is imputed exclusively to the one or the other, and that a third state, not necessarily connected with either, although sometimes associated with one or the other, is most frequently concerned in producing the discharge." " This is a state of vascular determination to the uterus and vagina, consequent upon the excitement or irritation of the nerves which supply them, in some cases carried to almost the pitch of inflammatory action, as in the acute states, whilst in others, as in the more chronic, it is attended by impaired tone of the extreme vessels in the internal surface of the organ, and probably also, in some instances, with deficient tone of the parietes of the organ itself." To this purely hypothetical view, the scepticism expressed by John Hunter, and previously quoted, aptly applies. How " vascular determination" should ever " not necessarily be connected with inflammatory action, and sometimes be connected with nervous irritation *and* impaired tone of the extreme vessels," &c., it might puzzle even him, were it true, to explain. The article on leucorrhœa is not the happiest effort of Dr. Copland's fertile and indefatigable pen.

In the Journal de Med. for May, 1843, will be found some remarks on the subject from Mons. Recamier, of Paris, who, in the treatment of female diseases, enjoys a very high celebrity in that metropolis. The 1st sect. of the article is upon the " Diffused phlegmasia of the mucous membrane of the vagina, os tincæ and uterus." "Acute state :—when these inflammations, whose causes cannot always at first be appreciated, are slight, their product is semi-diaphanous, but when they are of a certain

intensity, the humoral flux which results from them is not translucid, as in the slight inflammations, or like that of gastralgic leucorrhœa, but becomes more or less opake or whitish, greenish, or yellowish. An inspection of the entrance of the vagina enables us to distinguish its special cause, and the speculum shows how far it extends towards *the uterine orifice, whence this product is seen to flow when the inflammation affects the mucous membrane of the uterine cavity.* The touch teaches us but little in these cases." "When the inflammation, with or without granulations, or excoriations, resists appropriate means," which he describes, M. R. then injects the cavity of the uterus and vagina, with solutions of the nitrate of silver; "if the inflammation of the vaginal and *uterine* mucous membrane shows itself refractory even to this means, if the granulations are well marked, the membrane thickened, or the excavations assume an ulcerous aspect," he then applies the stick of caustic, even within the uterus. Speaking of a case, which we shall hereafter cite, he says, "I could mention many other facts of the same kind, in which the local inflammation was the point of departure of secondary symptoms, which ceased more or less instantaneously, or successively, or were at least advantageously modified, by the cauterization of the inflamed part." In the Encyclography of the Medical Sciences, Brussels, Dec., 1843, is a long and very elaborate article by Dr. J. H. Bennett (from the Jour. des Conn. Nov.), from which we shall make some practically useful extracts. It is entitled, "of ulcers and engorgements of the neck of the uterus." "The ulcerations of the neck have been differently appreciated by most describers. For some, the ulceration constitutes the whole disease; to it they refer the many symptoms which the patients present, and to it alone they address their treatment. For others, the ulceration is nothing, or almost nothing; it is but the symptom of an inflammation of the neck of the uterus, or of its mucous membrane." "Setting aside the degenerations of all kinds, I admit three species of ulcerations of the cervix: 1st—the ulcerations which take place in women who have had no children, have not acute vaginitis, or syphilis, primary, or secondary; 2d—those which occur in women who have either; 3d—those which may be referred to a preceding labor or miscarriage. Ulcerations of the first species may, strictly speaking, be accompanied by vaginitis; but it is then local, of slight extent, and limited to the parts in contact with the diseased part, evidently an effect and not a cause of the ulceration. These are rare, and depend oftenest upon excessive coition." The following passages state what, if true, is important. "It may be said that many women who have been lately married, do not conceive in consequence of lesions of this sort. Messrs. Gendrin and Emery have told me that they had several times been consulted by young women who had been married for six, twelve, and twenty-four months, who had not become pregnant, notwithstanding their anxious desire to become mothers. A few only had experienced slight hypogastric pains; most of them had perceived no abnormal sensation. When examined, they presented superficial ulcerations on the mucous membrane of the neck of the uterus, and slight engorgements of its tissue. The cure of these was followed, in most cases, by speedy conception. It is probable that many young women who do not conceive for one, two, or three years after marriage, owe their sterility to lesions of this kind, which are often cured without any treatment. It is, in fact, easy to conceive that the swelling which accompanies engorgement of the neck, and the presence of mucus

between the lips of the os, may close the cavity of the uterus to such a degree as to render conception difficult or impossible." "When it is inflammation of the mucous membrane of the neck which is the cause of the ulceration, it generally commences in the many mucous cryptæ with which it abounds. These inflame, either primarily, or secondarily to the inflammation of the mucous membrane, as do those of the mouth; and by ulcerating give rise to small apthous ulcers, which, later, becoming confluent, form one ulceration of greater or less extent. The first period of the inflammation,—that in which the mucous membrane of the injected neck is covered with many punctæ of a more or less vivid red color, formed by inflamed mucous follicles,—might be called granulated inflammation of the neck, whilst the name of granulated ulceration might be reserved for that of these crypts, and their union into a single ulceration. In this form of ulceration, there is always more or less engorgement of the tissue of the neck." Most of the ulcers met with in civil and hospital practice, depend, according to the author, upon, in some cases, a long preceding accouchement; by which inflammation, acute or chronic, of the womb, or laceration, is effected. To the consideration of these, indeed, the article is chiefly devoted. Sometimes the metritis is local, confined to the neck, arising spontaneously in it, or consequent upon the extension of the inflammation of the mucous membrane of its cavity. The engorgement is primitive, and the ulceration consecutive.

"Much has been said in latter times, of internal metritis as a cause of ulceration of the neck. I have almost always seen true internal (muco) metritis accompanied, besides a muco-puriform discharge, with hypogastric pains of considerable severity, greater than that which usually accompanies engorgements and ulcerations of the neck. The reaction of this inflammation, too, upon the economy, is greater than in the simple cases of the latter. The womb is larger and tender. If the presence of a puriform mucus between the lips of the os, as it may depend on local disease of the neck alone, be not sufficient to determine positively the existence of an internal metritis, its absence is conclusive as a negative sign." Speaking of a case of ulceration cured by caustic, Dr. B. observes: "We see that as soon as the caustic had modified the ulceration and destroyed its irritability, the raptus towards the neck stopped, and the engorgement had soon diminished one half. I have seen again and again very considerable inflammatory engorgements of the neck disappear in a few weeks, by cauterizing the ulceration *which had* evidently produced them, especially in the service of Mons. Emery. I think that most of the engorgements of the neck which depend on parturition are secondary, and the consequences of the ulceration." "Engorgement consists rather in the hardness than the size of the neck." He then goes on to assert the general origin of all malpositions of the uterus, in engorgement of that organ, malposition being wrongly considered by many physicians as almost always dependant on laxity of the ligaments which support it; seldom persisting after the cure of the ulceration and its consequence, engorgement, though the latter may remain after the former is cured. "Almost always marked ulcerations of the neck are accompanied with more or less intense vaginitis, and almost all women thus affected, say that they "see much in white" (have whites badly). On introducing the speculum, it (the vagina) is sometimes seen of a bright red, with smarting, extending to the whole mucous membrane, and even to that of the vulva; sometimes the rosy tint begins only at the inner half of

the tube, becoming deeper as it approaches the neck. *The ulcerated surface* (of the neck) *also secretes a purulent mucus, or pus* (?), *which unites with the more or less transparent fluid which escapes between the lips of the os*, and forms thus a thick layer which often conceals the neck, and must be wiped away to examine its condition. The presence of this vaginitis, *or leucorrhœa*, more or less marked, is so general, that it must be admitted to depend upon the morbid state of the neck." "Dyspeptic symptoms so often accompany ulceration of the neck, with copious *whites*, that we must be upon our guard when young women, placed in the above mentioned conditions, complain of them."

A Mons. Gosselin, in the Arch. Gen. de Med., January, 1843, has recently denied that any peculiar symptomatic value is to be attached to ulcers of the cervix in the great majority of cases. He regards them as forming only an accessory part of the disease, which really consists in inflammation of the uterine tissue, *especially of its lining membrane*, against which, and not against the mere ulcerations, remedial efforts should be directed. He details several cases to prove that ulcerations of the cervix give rise to no special symptoms, *but merely indicate the existence of a fully formed chronic metritis*. It is evident, he says, that the ulcers may be cured by caustic, and yet the *uterine catarrh* and general symptoms persist unchanged, since the application of caustic to the cervix uteri can have no influence on its diseased lining membrane." There is a great deal of truth in these passages, and we shall hereafter atttempt to dispose of the question.

In the American Journal of the Medical Sciences, Jan., 1844, Dr. Buel of this city has published an interesting "Report of the diseases of females treated at the New York Dispensary, &c." Under the head of Leucorrhœa, "A variety of vaginal discharges," says Dr. B., "have been confounded under this common term, often symptomatic of other and more grave forms of disease about the cervix uteri. Under this head I intend to embrace only those cases which consisted simply in an increased flow of *the ordinary mucous* secretion, unconnected with engorgements or ulcerations of the cervix and os." The objections to this simplification are many and obvious. Dr. B. says very justly, that "engorgement, hypertrophy, &c., are forms of disease extensively prevalent, and have until of late years been overlooked or misunderstood. It is a very frequent cause of a train of chronic affections which a great number of females in early and middle life suffer under, including more or less leucorrhœal discharge. Remedies are directed to relieve the debility and check the discharge, without an attempt to strike at the root by a removal of the cause. A discharge, white or colored, scanty or profuse, usually accompanies the engorgement, if of any extent, varying with the form of the engorgement from the cream white to different shades of yellow, brown and red." Dr. B. accurately describes simple engorgement ("accompanied with a discharge sometimes white, sometimes yellow, the cervix having an angry inflamed look, frequently deep crimson or violet. The cervix and adjoining part of the vagina are usually bathed in an abundant whitish or yellowish discharge, tinged in some cases with blood"), granular engorgement, and ulceration and granular erosion. The latter is excellently described in a quotation from Gibert. The article is highly practical and instructive, and some of the cases we shall hereafter avail ourselves of.

Dr. Ashwell's "Practical Treatise on the Diseases peculiar to wo-

men," just republished in Philadelphia, from the last English edition (1845), is a comprehensive and certainly most valuable volume; nevertheless the chapter on leucorrhœa has rather disappointed our expectations. Of the disease, Dr. A. makes three forms, the acute, the sub-acute, and the inveterate. "The simplest form of leucorrhœa is the result of mere hyper-æmia and vascular congestion. In its more serious forms, *inflammation* has succeeded, and *pus*, the proper and usual product of an inflamed mucous surface, is poured out." (124.) The first portion of this passage has our unqualified approbation: of the correctness of the concluding one, we entertain much doubt. "In several instances where I have used the speculum, the cervix has been pale: in more acute cases, *slightly red*, and in two severe attacks, of a *deep crimson red*." This corresponds with our own experience; not so the statement which succeeds. "In none, where there was not suspicion of a venereal taint, have I seen erosions or ulcerations." It is but just to say that in the section on simple ulceration of the neck, this remark is not repeated. On page 127 we find again repeated what we consider to be a very rare occurrence, if it occur at all. "When the leucorrhœa is chronic and aggravated, the secretion is decidedly *purulent*, green, or brown, the result of inflammation." Admitting freely, as Dr. Ashwell does, the inflammatory nature of some forms of leucorrhœa, he nevertheless tells us, on page 128, that "there is a form of the malady which, though in many instances the consequence of acute and inflammatory attacks, *is still oftener* that of constitutional and local weakness." Here again is the old theory of debility reiterated, and the same disease made to depend upon two directly opposite causes. But it is probably a vaginal discharge in all cases, since we are told that "it is white, and scarcely stiffens the linen." On page 130, Dr. Ashwell admits the existence of a sympathetic leucorrhœa. Dr. A. most strangely lays aside the distinction, of so much practical value, of leucorrhœa into uterine and vaginal (quoting, however, elsewhere Clarke's account of the inflammation of the cervix), because "it is very difficult to distinguish what part of two continuous membranes of identical structure are furnishing a *nearly identical secretion*." (p. 130.) If we are not in error, this last assertion is inaccurate, and not less so, that which follows; "it is known that the vagina is much more frequently the seat of the disease, than the cavity of the uterus." We find Dr. Ashwell relying upon the severity of the symptoms alone for the diagnosis, while "the frequent implication of both vagina and uterus," and the "difficulty, even when one only is morbidly affected, of distinguishing which it is," are not recommended and attempted to be ascertained, or overcome, by the use of what he admits, in the section on diagnosis, in which it receives a bare mention, to be the "only certain mode of diagnosis," the speculum. It must be acknowledged, however, that in other places in the book, this instrument receives its just amount of recommendation. Upon page 31, we find Dr. Ashwell qualifying his opinion of the production of Leucorrhœa by debility as follows: "because the system generally is delicate, it does not necessarily follow that the uterus and vagina must be in a state of anemia;" and he informs us that "local and long continued inflammation often produces constitutional weakness, and that, certainly, the phenomena of the disease "point to inflammation as one of its essential primary conditions." "When," says Dr. A. "*erosions*, or chancrous sores can be perceived on the os and cervix, the syphilitic character of the disease is established." If this were generally admitted, the treat-

ment now in use against the erosions seen in so many cases of non-specific leucorrhœa, would require considerable modification, and the consequence of such announcement among the better classes, we leave to the imagination of the reader.

With the following passage, corroborating an opinion of our own to be hereafter expressed, we are disposed to agree. "Leucorrhœa is sometimes *purulent* (?) and so far infectious as to produce in the male a discharge that cannot easily be distinguished from gonorrhœa" (134), and this "in women of indisputable purity:" and Dr. A. further says, "on one or two occasions, after abortion, I am almost confident that eruptions and decided ulcerations have been among the results of intercourse." Under the head of "treatment," the speculum is recommended in long standing and severe cases, and scarification is a favorite remedy of the author; a case is mentioned in which the "cervix was congested, red and extremely tender." Chronic metritis is said to be attended with a transparent mucous, or more viscid and opake discharge, or a muco-purulent fluid and blood (162), but discharges are not mentioned in connection with simple ulceration of the cervix and os. In none of the three cases recorded by Dr. A. was the speculum employed. We cannot consider the work as presenting an entirely satisfactory view of the subject in question: although as a whole, it is quite equal to any of its English predecessors. Dr. A.'s infrequent use of the speculum, lessens, we speak deferentially, the value of his pathological opinions; and sufficient prominence is not given to the conditions of the organ which it reveals. Some of the "transparent mucus," and possibly of this gelatinous white mucus, probably came from within the os. It is very rare to see the former "gelatinous," which uterine mucus always is.

The latest work which has appeared on the diseases of the sex, is the "Treatise on the Diseases and special Hygiene of females, by Dr. de L'Isére," translated by Professor Meigs of Philadelphia (1845). In this volume, which contains a good account of the now generally received pathology of the diseases of which it treats, it is, however, incorrectly, as we deem, asserted, that the leucorrhœal discharge, "far from being always the result of inflammation of the uterine mucous membrane, *is more frequently* determined *by relaxation, and atony* of the utero-vaginal mucous membrane." (307.) And on the next page he says that he does not regard "inflammation as the sole cause of leucorrhœa;" (308) and that he comprehends under that name only the essential and sero-*mucous* super-secretion which results *either* from *simple sub-acute, or chronic inflammation of the utero-vaginal lining membrane*, or from *a state of general or local atony.* He justly says that the "sub-acute and chronic forms are the true types of the disease." "The discharge, which is at first small in quantity, clear, or serous, soon augments, becomes thicker and white, lactescent, yellow or greenish; the spots on the linen are yellow, or greenish, and give it a starched stiffness;" (311) of the chronic passive leucorrhœa, he says, the discharge is commonly mucous, and hardly stains the linen; it has scarcely any odor, and the color is whitish; like that of thick whey. If abundant, the mucous discharge is generally lactescent, the discharge, when dried, stiffens the linen and leaves a greenish spot, deepest at its edges. Sometimes it is more consistent, flocculent and caseiform." (312.) We submit that this is exactly the description of a leucorrhœa purely follicular and vaginal (the author taking no notice of the distinction), and that the train of symptoms he has given, ending in death by hectic fever, cannot by any possi-

bility depend solely on this cause without the complication of some other grave malady (313). Dr. C. de L'. admits that a leucorrhœa may become so irritating as to communicate it (p. 315). He quotes Donné as saying that vaginal mucus is thick, creamy, and never ropy; uterine mucus, slimy, ropy and tenacious, and with difficulty detached from the os uteri. The p. m. appearances he enumerates as follows: swelling and softening of the vaginal and uterine mucous membrane: dilatation, redness, softness, and hypertrophy of the os; slightly bluish tint of the mucous membrane covering the vagina and vulva, from whence oozes from all parts, on compression, a fluid analogous to that secreted during life; vesicles, softness, looseness, and infiltration, of the lining membrane of the uterine surface; dilatation of vessels, ulcerations, erosions, cartilaginous aspect and gangrenous spots (317). This account is quoted from Blattin, Morgagni, and Lagneau (vide our citations ante) and is not, evidently, the result of the author's own observation.

Lastly, on page 320, the author commends the touch, by way of assuring ourselves whether *the passive chronic Leucorrhœa* is really idiopathic or symptomatic. Whatever may be the general merits of Dr. C.'s ponderous tome (and it is erudite and instructive), this chapter is not superior to others which have preceded it. That on "Redness and simple ulcerations of the os" is not original: that on chronic metritis is made up from Lisfranc and Duparcque.

By a most singular classification we find acute inflammation of the os and neck treated of in the section on acute vaginitis. On page 275 it is said to be proved, that when this is once established, under the influence of any cause whatever, it may, during the venereal act, communicate an urethral blenorrhagia to the male, and not only this, but even ulcerations, vegetations, &c. Still more singularly and objectionably, uterine catarrh is confounded with acute parenchymatous inflammation (even the puerperal) (277) and the following extraordinary statement is hazarded. "But these two kinds of inflammation rarely exist separately, and as their causes, symptoms, and treatment offer but slight and unimportant differences, we shall describe them under the common name of metritis (acute)." Afterwards, however, (p. 283) a diagnosis of acute metritis from uterine catarrh is made, and a chapter occurs further on upon puerperal fever. We content ourselves with merely indicating this unusual and perplexing arrangement: not impugning, however, the general merits of this elaborate compilation.

When we look back to the opinions which have now been quoted, we find that Sydenham, Manning, Cullen, and Leake, all support the view of the purely asthenic nature of leucorrhœa, while Hamilton, Clarke, Pinel, Bricheteau, Denman, Capuron, Locock, Boivin and Dugès, and even Burns, Taylor, Ferguson, Copland, Ashwell and Colombat, have given modified opinions, all admitting its occasional dependence on debility, nervous irritation, &c, &c., and yet acknowledging in terms sufficiently explicit, its dependence also upon vascular determination to, or actual inflammation of, the organs concerned in its production. It is but justice to remark, that Boivin and Dugès barely admit the possibility of its dependence on the former causes, while Locock, Ashwell and Copland, distinctly assert the general inaccuracy of the received opinions on the subject. But of those who have done so most emphatically, and asserted most boldly and at an early period in the progress of science, its dependence on a state of the parts purely inflammatory, we mention with pleasure the name of our

eminent countryman, Dr. Dewees, with which must be associated the honored names of Morgagni, Lagneau, Duparcque, Churchill, Lisfranc, Recamier, and that of Mr. Bennett. What opinions our own experience has led us to adopt on the subject, fully confirmatory as they are of those of the authors now cited, we shall deduce from the consideration of the cases from which they have been derived.

(*To be continued.*)

ART. III.—*Case of Intussusception.* By GEORGE M. MACLEAN, M.D., of New York.

I. H. N., aged 7 months, a healthy looking boy, but subject to colds, had been slightly indisposed for a few days, and had been purged, but not excessively, with syrup of rhubarb. On the morning of February 2d, 1845, he was taken with sickness of stomach, which continued through the day. At 6 P. M., when I first saw him, he was disposed to vomit at intervals: the thighs were rather firmly flexed on the abdomen, and the gums were moderately full. There was no fever, nor other appearance of disease.

At 9 the same evening, he discharged a small quantity of blood and mucus from his bowels, with increase of vomiting. On the approach of a paroxysm he would raise himself up, and lean his chest forward; when it subsided he would fall backwards, apparently asleep. He retained a remarkable brightness of countenance throughout his illness, and seemed by his looks to implore relief. He would swallow whatever was given to him, grasping the spoon and holding it to his mouth till it was taken from him.

On the 3d, at noon, the symptoms had not abated. A firm tumor, of about two inches in width, was felt extending across the abdomen just below the umbilicus.

On the 4th, the tumor was somewhat softer: the paroxysms were more frequent, but less violent. In the afternoon, he appeared more exhausted in the intervals. From this time he became gradually weaker, and expired without much apparent suffering, at 8 o'clock the next morning, having, since the attack, had no discharge from the bowels, except some small ones of the above mentioned character.

In the dissection, 12 hours after death, I was assisted by Dr. A. C. Post. A portion of the omentum and of intestines were found invaginated within the lower part of the colon. Part of the mesocolon was drawn down so as to present the appearance of a band confining the termination of the duodenum in the jejunum. On removing and laying open the diseased part, the embraced intestines (more especially the colon) were found to be highly inflamed throughout the caput coli, presenting a dark red aspect. The mucous coat of the containing part of the colon was also inflamed. Its peritoneal coat, as well as the remainder of the peritoneum, was free from inflammation. Around the valve of the colon there was a considerable thickening, with a hardness almost cartilaginous. The introsuscepted part measured, when extended without stretching, 18 inches, of which 12 were of the colon, and 6 of the ileum.

This occurrence being rare, the following observations may not be uninteresting.

Symptoms.—A subject, examined by Heister, had died of spasmodic constrictions.*

Morgagni † met with but one case, and that was so slightly constricted that upon gently turning over the intestines to ascertain what part was involved, all traces of it vanished. The only symptom mentioned was continual vomiting, for 21 days, the cause of which, as well as of the death, was doubtless, as he thought, an injury of the head. He quotes the following cases: 1. Two from Burgrarius; in one, "in a pretty confined state," there was no sign of iliac passion; in the other (which was of twice the extent of the former), there was some tormina and vomiting of remedies. In neither had inflammation come on. 2. A case from Hartman, of considerable extent, but without entire obstruction of the passage, in which there was no symptom of volvulus; the functions of the intestines being very well performed. 3. One from Widman, in which more than a geometrical foot of the jejunum was inverted, but still pervious. The symptoms were very severe pain, almost continual vomiting, yet not of matter like fæces, nor attended by suppression of stools. 4. One from Valentinus, with the same symptoms. 5. A case from Hoffman, attended by vomiting of excrement. 6. One from Weissius, producing violent pains, obstinate obstruction of the bowels, and finally volvulus.

Dr. Thomas, of Penn., has related a case‡ of a child 3 years old, who, after exposure to cold, was seized with pain in the bowels, and afterwards, during sleep, with opisthotonos, attended by a copious evacuation from the bowels. The subsequent symptoms were laborious slumber, with hot and dry skin, full and frequent pulse, dry furred tongue, open eyelids, and pupils much and permanently dilated. After antiphlogistic treatment, the pulse was slower and less tense, the skin dry and husky, the respiration hurried and laborious, the pupils contracting and dilating frequently, without variation of light. It terminated fatally in 40 hours from the time of attack.

The symptoms in the case reported by Dr. Harlan,§ were restlessness, white and furred tongue, little or no fever, irritability of stomach, constipation, and a protrusion through the anus, resembling a prolapsus of the rectum, whenever the patient strained.

Dr. Lee could obtain little satisfactory information respecting his case ‖ prior to his first visit. The child was 4 months old, was represented not to have been well for 2 or 3 weeks, to have had frequent fits of screaming, been very restless, started in sleep, and vomited some. The symptoms observed by himself were convulsions every few minutes, no fever, pulse imperceptible, respiration quick, and at times laborious, countenance pallid and sunken, with a peculiar transparency of the eyelids, the abdomen but little tumefied, and not painful on pressure, small discharges of whitish viscid slime streaked with blood, dilatation of the right pupil and contraction of the left, and coma.

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* Med. Chir. and Anat. cases.
† De Sedibus et Causis, Alexander's translation, Letter 37, Article 33.
‡ Med. Record, Vol 16.
§ Med. Chir. Rev. for July, 1839.
‖ N. Y. Med. and Phys. Jour., Vol. 16. (case by C. A. Lee.)

In Blacklock's case,* there was obstinate constipation, but without symptoms of inflammation until towards the close.

Vulpes' patient,† who discharged three feet of small intestines, was afflicted with volvulus.

In Mr. Gorham's case‡ there were discharges of blood, crying with expression of pain in the countenance, dilated pupils, pulse 200, vomiting, hot and soft abdomen.

Situation.—In Heister's case there were two intussusceptions, one not far from the stomach, and the other near the large intestines. Haller found them in various situations: in one, the lower part of the colon was received into the rectum. In the time of Morgagni very few had seen it in the colon. Ruysch had only once seen it in that part, but often in the small intestines. Of eleven other cases referred to by Morgagni, five were seated in the jejunum, four (two were double, and one was triple) in the ileum, one in the colon, and in one the ileum was received into the colon. In Dr. Harlan's case, about an inch of the ileum, the cœcum, and a part of the colon, were involved. In Dr. Lee's case, there were six or seven involutions in the jejunum and ileum. In Dr. Thomas' case, the seat was the upper part of the ileum, and perhaps a part of the jejunum: in Blacklock's the ileum: in Vulpes' the jejunum. In Mr. Gorham's, the lower portion of the ileum was received into the ascending part of the colon, and it into the transverse.

Causes.—Haller,§ having observed it in a living rabbit, repeatedly afterwards produced it in frogs. "In these animals," says he, "if you touch any part of the intestines with anything corrosive, it is immediately constricted, and soon after, the part next adjoining it gradually ascends, and folds itself over the other, so as in a manner to sheathe it."

In Heister's case, the intestines between the two involutions were filled with worms. In Thomas', there was a large collection of lumbricoid worms. Dr. Lee thinks his case was caused by nephritis. In Morgagni's own case, a worm was present, as in several of those he quotes, e. g.: Pyerus saw worms rolled together in an ileum, in which were three intussusceptions: and Ruysch, in two instances, found worms within the constricted part. Hence he concludes, that any concurrence of circumstances, which will produce a dilatation of one, and a descent or contraction of the other, of two contiguous portions of intestines, will cause an intussusception. Among the former kind he places flatus, and among the latter weight, and worms. Dr. Lee seems to entertain the same opinion, supposing also an inversion of peristaltic action from the rectum upwards. If this opinion be correct, a practice which has been highly commended of late years, in such cases, cannot but be injurious, viz. inflation of the bowels. And in those cases, the record of which I have had an opportunity of perusing, in which it was thought efficacious, there was, to say the least, an uncertainty as to the presence of intussusception; one case, however, must be excepted, viz. that of Mr. Fox,‖ in which "a portion of one of the intestines, with some of the mesentery still adhering," were discharged, and yet the boy recovered: the inflation,

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* Amer. Jour. Med. Science, Vol. 113, from Glasgow Med. Jour., 1831.
† M. C. Rev for Jan., 1834, from L'Observ. Med. di Napoli.
‡ Ibid, from Guy's Hosp. Rep., No. VII.
§ Pathol. Observ.
‖ Med. Chir. Rev. for July, 1839.

however, probably did not aid in the cure. But it should be observed that, in my case, there was no unusual quantity of air present; probably, the cause was the thickening of the ileo-cœcal valve—and in Heister's there was scarcely any in the intestines, so that they were pressed partly into the pelvis, and partly to the sides of the abdomen, the linea alba and recti muscles, lying upon the aorta and lumbar vertebræ. Morgagni adds, "However, no cause is supposed to be more common than convulsive motions" of the intestines. May not most of the slight cases which are generally regarded as harmless, be produced during the struggles of death?

Prognosis.—The opinion is generally entertained that uninflamed intussusception, is not a dangerous affection. But the cases of Burgrarius favor a contrary conclusion. The opinion of Morgagni seems correct. He acknowledges "that it is not at all necessary any very violent disorder should arise, where there is a lax susception, that does not straighten the passage greatly." But he says a susception "is not only conceivable, while the connection with the mesentery is preserved, but is also very injurious, on account of this very connection. For when one part of the intestine enters within the part next to it, the portion of the mesentery, that is annexed thereto, must enter in at the same time. Wherefore, if it stay there for any considerable time, and any constringing cause come on, the motion of the blood through the vessels being retarded, it will swell to such a degree, as to hinder the intestine that has entered in from receding, and likewise prevent the passage of the matter that was about to descend." "If the susception is not lax, and shuts up the passage for a long time together, or at least nearly shuts it up, a volvulus, or pains, inflammations, and other symptoms of this kind, are the consequences."

Bearing in mind the cases of Vulpes and Fox, it must be admitted that recoveries do sometimes occur; yet when the symptoms have so far progressed as to render the existence of intussusception probable, there can be very little grounds for hope of recovery. Mr. Gorham considers it necessarily fatal, when occurring at the ileo-cœcal valve, because the ileum is received into the colon without any preternatural contraction, whereas, when it results from spasm, the inner fold acts, on the relaxation of the spasm, in a contrary direction, and thus tends to disengage itself. He remarks, "In all the fatal cases reported, the same intestine, viz. colon, had formed the containing fold, and this had grasped the contained part (viz. the lower portion of the ileum, the vermiform process, the cœcum, and more or less of the inverted colon)." Surely here was contraction. Lee, Thomas and Blacklock's cases show that it can be fatal when occurring elsewhere.

Art. IV.—*Notice of some Experiments for the Cure of Deafness.* By Dr. P. Meniere, M.D., Principal Physician to the Royal Institution for Deaf Mutes, at Paris. [Translated from the French. An article in the "Annales de l'Education des Sourds-Muets et des Aveugles." Paris: 1844.]

It is unnecessary in this place to refer to the numerous attempts made since the commencement of the present century for the cure of deafness

(surdi-mutité). That the solution of such a problem appears very difficult, even impossible, is not sufficient, thanks to God, to cause the human mind to give up new researches, and not to endeavor earnestly to attain at last so desirable a result.

In whatever point of view deafness is considered, it should be acknowledged that this morbid state, whether congenital or acquired, demands for its proper treatment, a thorough knowledge of the special conditions that constitute it. As a consequence of this principle, it will be admitted that before treating a deaf mute it is necessary to subject the organs of hearing to a strict examination, in order to appreciate correctly the changes in them.

I would not, however, prohibit every empirical attempt; there are sufficient facts to prove that happy results may be expected from these hazardous experiments. Are we sufficiently advanced at the present day to say with certainty what are the physical conditions of the deafness of such or such an individual? Men specially devoted to this subject, and whose position has brought under their observation a great number of deaf mutes, dare not reply in the affirmative to this question. The profound study of the ear, during life, and after death, proves that, with many deaf mutes, this organ does not differ perceptibly from that of one who hears. In other cases some exhibit an arrest of development, some mal-conformation, some organic imperfections, which are believed to be directly connected with the absence of hearing; while others still present external injuries, the result of incidental diseases, which have destroyed the most of the middle ear, or tympanum ("caisse du tympan").

It will be perceived at a glance, that deafness, arising from such different causes, cannot be cured by *one* mode of practice; and it is astonishing that the public, and physicians themselves, receive without doubt, the announcements of the recovery of deaf mutes, which are often met with in scientific and other works. The least critical knowledge would suffice to put the reader on his guard, in relation to such miracles; but few persons have the courage to investigate the subject, and demand proofs, so that the most partial assertions are received as demonstrated truths.

Within a few years new experiments have been made, and it may be useful to state in what they consisted, and what have been their results. Being an impartial witness of these experiments, and knowing perfectly the deaf mutes who have been the subjects of them, I am prepared to furnish upon this point exact information, the value of which I hope will be appreciated.

Dr. Turnbull announced himself the inventor of a medical preparation, by the use of which he pretended perfectly to cure deafness. The English Journals published numerous examples of cures, and soon the inventor of this remedy visited Paris to continue his experiments, and prove his success. Invited by distinguished persons to give to this physician all necessary facilities, I placed at his disposal four pupils of the Royal Institute for deaf mutes, reserving to myself the right of superintending the experiments, and studying the results.

I should first say, that Dr. Turnbull examined the external passage of the ear of my deaf mutes, only with the design of ascertaining the presence of ceruminous masses, which would prevent liquid medicine penetrating to the bottom of the ear. In one of them there was com-

plete destruction of the tympanum, and the small bones of the covering; two others had these organs in good condition, while the fourth had the tympanum strongly depressed within, and adhering to the internal coat of the cavity of the tympanum. The two pupils having the ear sound, at least in appearance, were hardly sensible of the most piercing sounds. The two others, hearing a little, could speak a few words taught them in childhood, and belonged to that class of deaf mutes, the most numerous, in which the hearing is destroyed by accidental causes, but not totally, or sufficiently so to render all oral communication impossible.

The English physician did not make any distinction between these pupils; he did not ascertain by any previous examination, the degree of hearing of each one, and administered his remedy to all in the same manner. He made use of a liquid substance slightly aromatic, almost tasteless, introduced lukewarm into the external opening, leaving it in contact with the bottom of the passage for two or more minutes—keeping it in motion by an instrument of soft leather, so as to facilitate the absorption. The conduit remained closed for some moments with a piece of cotton, and soon the deaf mute was subjected to experiments to demonstrate that he had become capable of hearing.

The experiments made for this purpose consisted, first, of a violent noise, produced by striking two bound volumes, one against the other, held at the distance of some "centimetres," only, from the ear, in such a way that the air put in motion by the concussion of the volumes, struck all this side of the head, and caused at the same time a sudden noise, and a very powerful impulsion,—a double sensation, which confounded itself and prevented the result from being appreciated. Dr. Turnbull thought that this startling shock must awaken the sense of hearing, and dispose it to perceive lighter impressions; and, indeed, immediately after this explosion, he placed a watch at the distance of twenty or thirty "centimetres," more or less, and according to him, its ticking was heard without difficulty.

It would be very easy to show that these experiments are inconclusive, that they involve sources of error, and are far from proving what the English physician wished to demonstrate. While the deaf mute indicated by a sign that he heard the noise of the watch, and the numerous assistants testified their admiration of the result of an experiment so singularly made, the same child remained completely unconscious of the most violent shouts,—and this supposed perception of the ticking of the watch took place in the midst of a stunning noise, which prevented any of us from hearing much louder sounds.

These experiments were repeated three times, with similar results, and the Journals had already announced these *wonders*, when, for sufficient reasons, this useless labor was discontinued. It was proved that the four pupils were then precisely in the same condition, with respect to hearing, as before the treatment of the English physician. We have since learned that the active property of the medicine introduced into the ears, was owing to a preparation of "Aconitum Napellus," a substance which, every one knows, exerts a remarkable influence upon the brain, upon the nerves of the senses, and more particularly upon the auditory nerves. I should add, that this mode of treatment of deafness applied by its author to all the various imperfections of the organ of hearing, has been severely condemned in England, and for some years it has ceased to be noticed.

In this instance he made use of an empirical process, employing a stimulating substance, applied directly upon the external part of the auditory passage, and designed for immediate absorption. Without troubling himself as to the causes of the deafness, and the changes of the auditory organ, without seeking to render himself acquainted with the probable condition of the acoustic nerves, of their atrophy, of their absence even, or of a defect of conformation absolutely irremediable, this same substance was indiscriminately applied hap-hazard, and the skilful hand which administered it, obtained infallibly the same result in four cases, which were found to be, in some respects, essentially different. Who does not perceive, at first sight, that these processes have in them nothing of a scientific character, and that they are fitted to strike the multitude and produce illusions always easily effected ?

I have now to speak of another experiment made like the preceding at the Royal Institute for deaf mutes. M. Dupotet having applied animal magnetism to the cure of a great number of diseases, thought that this agent might produce, among deaf-mutes, the sensation of hearing, since it procured some perceptions of a different nature, in the absence of the sentient organ, and of the agent capable of acting upon it. I am not in this place to give my views upon the value of this principle. Whatever it may be, M. Dupotet took under his care Miss B., formerly a pupil of this Institute, and soon he believed he was able to announce to the Academy of Sciences of the Institute that he had by magnetism alone restored to hearing a deaf-mute ; that this deaf-mute heard and spoke,—and that by the aid of magnetism this great problem of the curing of deafness was thus solved. A committee was appointed to examine the facts, to attend some new experiments, and I was directed to superintend the employment of this new means (" moyen") upon three pupils of the Royal Institute.

Here again, there was not, on the part of M. Dupotet, any previous examination of the ear ; he made no experiments with the design of assuring himself whether these children heard a little, and even to what extent ; in a word, he commenced, at once, the particular " passes" designed to produce magnetic sleep. I had taken care to assure myself that two of these pupils heard all loud, sudden, explosive sounds, that they could even imitate them, and that the third, much more deaf, remained almost entirely insensible to these causes of auditory impressions.

Thirteen sittings from one to two hours each were devoted to these experiments. The three pupils were very slightly affected by the magnetic influence of M. Dupotet ; neither of them slept, neither of them appeared to reach that state of somnambulism called " lucid ;" in fine, the action of this fluid, so powerful it is said, did not manifest itself by any perceptible sign. I kept a very minute account of all that was done by the magnetizer and the magnetized. I scrupulously fulfilled my task, not forgetting any of the circumstances which presented themselves to my sight, and I must say that the result was *nothing*. These pupils heard even slight sounds, when they were produced suddenly by a blow near the ear ; but another deaf-mute in the same primitive condition subjected by myself to the same experiments of hearing without having been magnetized, perceived equally well the same sounds, produced in the same manner, and I have long been satisfied that this experiment would succeed upon most of our pupils.

It always happens, in cases of this kind, that a little use improves the

hearing; that the frequent repetition of these experiments renders those who submit to them more impressible; and it has been known a long time, that almost all deaf-mutes become susceptible of sounds, which did not strike them at first. The ingenious experiments of Mr. Itard have demonstrated all that can be gathered upon the education of the ear, and I can verify all the observations of this learned physician, from attending the experiments of M. Dupotet. But I have also seen that this improvement of the hearing does not exceed certain limits, that the progress was very limited, and that the unfortunate deaf-mute soon arrived at a point beyond which he could not improve. All conscientious observers have confirmed these results already acquired to science; and modern experimenters, who appear ignorant of these facts, ought to study them forthwith, to change their starting point, and not to cry a miracle when by any means they believe they have developed the auditory sensation, which exercise alone infallibly produces among the greater part of deaf-mutes. Moreover, the successful efforts of M. Dupotet have been attended by the committee of the Institute; the report of M. Magendie subjected these facts to a rigid examination, and the conclusions of the reporter expose the insignificance of the pretensions of the magnetizer.

I might here give all the reasons for this work of the committee of Academy of Science; it will suffice, however, to refer to this document, which is of a highly scientific character. I will only say that the art of experimenting is not so easy as one thinks, and within the ability of every one. It is necessary to surround oneself with infinite precautions against the numerous causes of error which arise on every side, especially when one attempts to examine the living phenomena of our organization. Whoever is ignorant of the anatomy of the ear, the physiology of the acoustic nerves, the laws of the propagation of sounds, the differences of voice, tone, &c., cannot pretend to throw any light upon these difficult questions. An attentive physician who ascertains with surprise the numerous varieties that are met with among the principal kinds of deafness; who remarks the facility with which certain sounds are perceived, while others much more intent are not; who observes the singular circumstances having a marked influence upon hearing,—such a physician, I say, will remain convinced that these attempts, empirical or otherwise, should be without useful results, because they do not possess any solid foundation, because they are without value, as without ability. To appreciate what is to be done in this work, one must know what has been done; he should study these questions, so complex, so delicate; he should live with deaf-mutes, to know their particular defects, and what is suitable to be done for them. Far be it from me to think of throwing discouragement into the minds of those who feel impelled to the accomplishment of this object. Never was there a more useful subject of research proposed to the human mind, but it is important that these experiments should have an undoubted scientific character, and that those who undertake them should be influenced only by honorable sentiments.

ART. V.—*Extracts from the Recorded Proceedings of the New York Medical and Surgical Society.*

[IT gives us great pleasure to invite the attention of our readers to the following extracts from the proceedings of the *New York Medical and Surgical Society*, and we take this occasion to return our cordial thanks to the gentlemen connected with this flourishing association, for their liberality in allowing us the privilege of access to their "Minutes," and of publishing such portions as we shall deem of sufficient importance to find place on the pages of the Journal.

The Society, which has now been in existence more than ten years, is composed of active, working men, who are doing much to sustain and advance the interests of Medical Science in this city. Former numbers of this Journal will bear testimony to their zeal and energy; and many articles from their proceedings have been republished in foreign periodicals, and have had a wide circulation in different publications at home. A faithful record of their future doings will hereafter constitute an important feature in the character of our Journal.]

Case of Strangulated Congenital Inguinal Hernia. By S. P. White, M. D.—In the month of October last, I was requested to meet Dr. G. F. Huntington in consultation upon a case of Strangulated Inguinal Hernia. The subject of the case was Mr. K., aged about 35 years. The morning of the day upon which I saw him, he had gone down to Wall street as usual for the purpose of attending to his regular business. While sitting upon his chair, he felt some uneasiness in the left groin; and the pain, with a tumor, increasing rapidly, he hastened home to his dwelling. Dr. H. finding the hernial tumor very large, with no disposition to return, after using warm fomentations, with the hips elevated, together with taxis, requested a consultation. I saw the patient about noon, and found the hernial tumor very large and tender to the touch. Upon examining the tumor I could find no testis on the left side, as it was completely enveloped by the protruded parts and serum. Upon questioning him very closely I ascertained that he had been troubled with a rupture from infancy, that he had kept the fact to himself, and that he had never worn a truss. It was plain therefore that it was a case of Congenital Inguinal Hernia.

I first bled him to syncope, and then advised the tobacco injection. The medical treatment appeared to relax the parts some, but not sufficiently to enable us to return the protrusion, and during the operation afterwards, we ascertained that it was owing to the stricture being situated in the thickened hernial sac. The patient being very restless, and medical means not answering the purpose, we concluded to proceed to the operation soon after candle-light, before serious effects should be produced by the strangulation.

The instruments and dressings were accordingly prepared, and the patient prepared for the operation. With the valuable assistance of my friend Dr. Huntington, I commenced by making an incision about three inches long, and which embraced about two-thirds of the tumor. After dividing through the superficial fascia, I was surprised at not finding the fibres of the cremaster muscle more distinct; on the contrary, they were scattered and indistinct. The hernial sac was carefully opened, and as soon as this was done, there escaped a large quantity of serum, which readily accounted for the large size of the tumor. A small knuckle

of intestine was found firmly strangulated, and the left testis lying perfectly uncovered. Upon finding the intestine sound, I proceeded to search for the stricture. There was but a slight stricture at either the external or internal ring. What there was I divided, but still it was found impossible to return the intestine. After considerable difficulty, I succeeded in ascertaining that the principal stricture was seated in the mouth of the thickened hernial sac. The finger was passed under the stricture, the probe-pointed bistoury directed along the finger under the stricture, and then a division of the stricture was effected.

As soon as the stricture was divided, the patient remarked, "that was the worst of all." I replied that was the "best of all," and the intestine was soon returned. The wound was dressed with sutures, adhesive straps and bandages. Some tenderness of the abdomen was perceived a day or two after the operation, which was relieved by a blister plaster and laxative. The wound united handsomely, a truss was procured, and under the judicious care of Dr. Huntington he soon returned to his customary avocations.

[In introducing the following important case to the attention of our readers, we deem it but an act of justice to the operator, Dr. WHITE, to preface it with a few remarks. The case has been alluded to, in one of our daily papers, in a manner calculated to injure the reputation and professional character of the operator; and, were it not for this circumstance, we should feel disposed to publish the report without any comments.

The result of the case was unfortunate—different from what was anticipated; and those who seize every opportunity to judge harshly, and criticise, with or without reason, may think that blame is imputable to the operator. Such, however, is not our view of the matter. We have known death to result from an attack of erysipelas, caused by removing a simple tumor from the scalp, and yet no one thought of blaming the surgeon. We have known others die on the operating table, from some untoward accident, not foreseen, and, therefore, not guarded against; and yet the reputation of the surgeon has gone unscathed. In the present instance, the professional reputation of Dr. WHITE is a sufficient guarantee, not only that the operation was a justifiable one, but that it was performed in a scientific and skilful manner. The man who has tied the internal iliac artery may certainly be presumed to know enough of surgery, and surgical anatomy, to remove an encysted tumor, of the size of a hickory nut, from over the clavicle. It is stated, by the surgeons who saw the case in consultation, that the artery, whence the hæmorrhage proceeded, was an anomalous one; and, as it ran *through* the tumor, must necessarily have been cut in the operation. The patient died from erysipelas, not from hæmorrhage: but, even had the case terminated fatally from the effects of the latter, we should still be of the same opinion, that no blame could justly attach to the operator. As surgeons, no more than other men, can see very far into futurity, they have to be governed, like the rest of the world, by reasonable probabilities, based on former experience. Such experience could have led no one to apprehend any danger from such an operation. For consequences resulting from anomalous structure, which could not be anticipated, we see not how any man can be held responsible. Were all the results of *medical*, as well as *surgical* practice, known and published to the world, we fear that the mishaps and errors of the latter would be too insignificant for notice, when compared with those of the former. Let him who is without sin, cast the first stone.]

Case of Tumor of the Shoulder, by S. P. WHITE, M. D.—Mrs. B. was a married lady, of thirty years of age, and for whom and her family, I had been in the practice of prescribing about seven or eight years, and with whom I had been on terms of friendly intimacy. While attending upon her child, in the latter part of December, she called my attention to a tumor, about the size of a large hickory nut, situated above the clavicle, on the right shoulder. She said that it had been there about six months, and that it was increasing in size. It was of a globular form, felt hard, something like a wen; though I concluded it was, what it turned out to be, an enlarged gland. I immediately recollected that I had operated upon a similar tumor, in Columbia county, with this difference, that the neighboring glands, in the latter case, had become contaminated. The disease consequently returned, some months after the operation, assumed a malignant character, and destroyed the patient. As soon as I had examined the tumor of Mrs. B., finding it situated quite superficially, directly under the platisma myoides, and apprehensive lest by its growth it would dip down among the important vessels of the neck, I advised its removal.

The ninth of January was accordingly appointed for the operation. On that day, accompanied by Dr. S. BROWN, I made my call, prepared to remove the tumor. The husband inquired, whether there was any danger in the operation: I replied, that there was more or less danger in every surgical operation.

When she sat down to have the tumor removed, I noticed that her firmness had, in some measure, forsaken her; and that opinion was confirmed by her uneasiness and restlessness during the operation. She subsequently said that the night previous she had not felt well, having been troubled with a pain in her head.

The operation was commenced with the assistance of Dr. B., by making an incision two inches long, parallel with the fibres of the platisma myoides, directly over the centre of the tumor. The platisma was next divided, the circumference of the tumor then detached by dissection, and the base nearly separated from the lower towards the upper part of the tumor, when a sudden jet of blood took place. I hastened the separation of the tumor, and after removing it, I requested Dr. Brown to stop the hæmorrhage by pressure with a sponge. He immediately complied with my request; and, after a few minutes, the sponge was removed. The bleeding did not return; on the contrary, the wound was perfectly dry. Dr. B. was under the impression that the artery which adhered to the tumor so closely, and which furnished the hæmorrhage, was either the transversalis colli, or an anomalous branch of some large adjoining artery. Dr. J. K. Rodgers, who is an excellent anatomist, and who saw the case the same day, was inclined to consider the latter opinion most correct, viz. that it was an anomalous or irregular branch. Dr. A. C. Post, another good anatomist, thought it might be the supra-scapulary. The wound being free of blood, and there appearing to be no disposition to a return of bleeding, it was dressed with two sutures, adhesive straps, lint and bandages. The patient walked up to her chamber, and lay upon her bed. After spending about an hour in the house, I examined the dressings again, found them perfectly dry, and returned home.

About an hour after my return, I was requested to visit the patient as soon as possible. Upon arriving at the house, I found her sitting up, and the dressings saturated with blood. I immediately removed the dress-

ings, checked the hæmorrhage by pressure with both thumbs, and requested them to send for a consulting surgeon. Dr. Mott being out, the husband went in search of others; and, to show the scarcity of doctors, at times, in New York, I will mention the singular fact, that he walked rapidly from Cottage place, through Bleecker street, and down Broadway as far as Dr. Cheesman's. Although this was done at mid-day, and upon a pleasant day, he could not find a surgeon or physician at home, or in the street, and returned without one. In the course of a short time, however, Drs. A. C. Post, A. L. Cox, V. Mott and J. K. Rodgers, severally arrived, in the order mentioned.

It was suggested by Dr. Mott, at the consultation, to arrest the hæmorrhage, by placing a small piece of dry compressed sponge at the bottom of the wound, and then to fill up the wound with other pieces; over these to place a larger piece of sponge, and for an assistant to make gentle pressure with the hand until the hæmorrhage was arrested. This course was concurred in by the other gentlemen, and carried into successful execution. The hæmorrhage did not return. For the first few days, pressure was made by hand, and afterwards by adhesive straps, which did not effect the pulsation in the radial artery. The patient was kept in bed, perfectly quiet, upon her back, and bore the confinement with remarkable patience.

For the first week I watched the case night and day, except when I was relieved by Dr. Post or Cox, for a few hours, and also by Dr. V. Mott, Jun. Drs. Mott and Rodgers continued as consulting surgeons. The pieces of sponge were gradually removed, and on the tenth day the last sponge was removed, without any signs of hæmorrhage. The wound was dressed with lint, spread with yellow resin ointment, and pressed to the bottom. On the sixteenth day, the wound had nearly healed, and the patient was desirous of sitting up. This, unfortunately, she was permitted to do. While sitting in her rocking chair, she was attacked with a chill, which was subsequently followed by erysipelatous fever. During the previous week, she had been troubled with a severe, obstinate attack of vomiting; and when the erysipelas appeared, this symptom returned, with a distressing pain in the left side. The pulse was about 120 through the whole progress of the disease. The tongue was furred, but moist, until the latter stages of the malady.

A redness, with tenderness upon pressure, appeared on the back part of the right shoulder, a few days after she complained of the chill. The erysipelas, which assumed the erratic and typhoid form, extended across to the opposite shoulder down the back and chest, and to the elbow of the right side. It extended also over the face and head, producing considerable tumefaction of the face, closing the eyelids, accompanied with a brown, dry tongue, soreness of the throat and stomach, stupor and delirium. Every effort was made by my colleagues and myself, to check the progress of the disease; and every attention and kindness was shown her by her family and friends, but without success.

When the erysipelas first appeared, it was covered with scorched rye flour, and the sound skin adjacent was pencilled with the tinct. of iodine, but it did not arrest it. Leeches were applied to the right arm; emetics, cathartics and enemas were administered as they were required, with the sol. ammon., acetat., and occasional doses of the sul. morphine, and tinct. belladonnæ. There was some ptyalism occasioned by a dose of the hydrarg. sub. mur. administered by one of my colleagues, who had

charge of the patient for a few hours. The salivation, however, was relieved by slight astringent and mucilaginous washes. The severe vomiting, which occurred twice during the confinement of the patient, was most effectually relieved by an epispastic, applied over the abdomen. During the latter stages of the disease, when the symptoms became typhoid, our chief reliance was on the aromat. spirits ammon., wine and quinine. They did not succeed, however, in saving our patient, and she died on the fifth of February, about four weeks after the operation.

A post-mortem was not made, as the husband stated that some of the family were opposed to it. Thus unfortunately terminated a case, which was commenced with the belief that the result would have been far different and more satisfactory.

It occurred in a patient from whom I had received uniformly, kind and respectful treatment for a number of years; and every practitioner of experience can appreciate the disappointment which was felt when it terminated so contrary to our wishes. It affords, likewise, a lesson to surgeons, both old and young, that however safe and practicable an operation may appear, still perilous consequences may unexpectedly ensue after its performance. In the simple operation of vaccination, we all know cases have occurred where there has been predisposition to erysipelas; and where that disease has supervened, terminating fatally. It has also been produced by any irritating cause, by the use of mercury, exposure to cold, and sudden emotions of the mind.

Remittent Fever with profuse hæmorrhage from the bowels—recovery.—Dr. Macdonald mentioned that he was called on the 17th December, 1844, to see J. W., in consultation with Dr. James S. Cooper, who informed him that the patient had been ill for a week before he had placed himself under regular treatment, and that during this period he had taken two drastic purges. Dr. Cooper found him on the 10th December at his first visit, laboring under the ordinary symptoms of remittent fever—with a pulse about 95, and slight tenderness of the abdomen. He administered 15 grains of blue mass, which acted mildly as a cathartic, and followed it by mucilage and ipecac. He also gave a few minute doses of calomel without any apparent constitutional effect, and allowed him as much ice as he chose to take. Under this treatment the case appeared to be going on favorably (the patient's bowels being moved twice daily), until the morning of the 17th, when Dr. C. was called in great haste, and found that J. W., on going to stool, had passed about a pint of almost unmixed blood—he was perspiring profusely—his pulse about 80, full and soft. On consultation 1 grain of acetate of lead, with $\frac{1}{4}$ grain of opium, was now ordered to be given every hour, with the free internal use of ice. There having been two more large evacuations of blood during the day, the lead was given in doses of 3 grains every two hours. 18th. One discharge of blood during the night—tongue dry and coated; with a red tip—the lead continued in 3 grain doses every six hours. 19th. A bilious-looking evacuation unmixed with blood—the symptoms all more favorable till the morning of the 20th, when he had two pretty free discharges of blood in quick succession. The lead, which had previously been exhibited every six hours, was now given every three hours during the day, but with little benefit; as the hæmorrhage recurred every four or five hours. On the 22d, in consequence of the continued recurrence of the hæmorrhage, and particularly as it seemed more profuse during a

daily evening exacerbation of fever, the lead was discontinued, and 1 grain of sulphate of quinine administered hourly during the remission, together with 10 grains of alum every hour.

23d. Three discharges of blood since yesterday morning—pulse about 90 and very small—the patient sinking. Omit the medicines prescribed yesterday, and let the patient take nitrate of silver 1–2 grain with opium ¼ grain combined, every three hours; and in the intervals powdered ipecac 2 grains and catechu 3 grains, so that both the former and the latter were each exhibited every three hours—warm turpentine was also applied over the whole surface of the abdomen.

24th. Two small discharges of blood during the past night; tongue clean, but disposed to dryness—pulse 90—symptoms generally better. 25th. No passage of any kind from the bowels since yesterday morning—continue treatment. 26th. The same—but towards evening, after considerable uneasiness in the bowels, he had two pretty free and natural-looking evacuations. From this time the case went on well. There was no return of the hæmorrhage, and the patient slowly recovered under the use of tonics (iron and quinine). He is now perfectly well, attending to his ordinary business, and is more fleshy than he has been for years.

It may be added that he had two or three times during his illness hæmorrhage from the nose—that the whole quantity of blood lost from the bowels was at least 10 lbs., that the whole quantity of acetate of lead taken was 3 ounces—and of the nitrate of silver 12 grains.

Case of Rheumatism of the Uterus. By Isaac E. Taylor, M. D.—April 4, 1844, P. M., I was requested to visit Mrs. McG. Mimifare, aged 23, who was supposed to have all the symptoms of being shortly delivered, though but five months advanced in gestation. I found the patient lying upon her back, and complaining very much of the excessive pain she was suffering, which came on in paroxysms, and which lasted fully five minutes. The countenance expressive of much pain, abdomen tender to the touch. Uterus hard and contracted, skin natural and pulse tense. The pains were of an expulsive character. An internal examination discovered the neck of the uterus very hard and firm—the os closed, exceedingly sensitive, and covered with a number of follicular glands, enlarged to the size of a pea, the uterus during the contractions appearing to force itself completely into the cavity of the pelvis. The remissions were not of long duration. The treatment was warm fomentations to the abdomen, pulv. Doveris 10 grains every three hours, and after two doses and the frequent application of fomentations, the paroxysms ceased, and she slept well during the evening. The paroxysm in this instance commenced at 12 o'clock A. M. and ceased at 1 P. M. April 5th, A. M., the husband came in great haste, saying she was expected to be confined every moment, and would probably be delivered before I arrived. When I arrived, her screams were very loud, from the severity of the pains she was suffering—countenance anxious—the abdomen could not bear the slightest pressure. The uterus strongly contracted, and I was informed that the pain had continued one half hour—it having a true expulsive character. Both she and her friends could not be persuaded but that the child must be shortly delivered—the skin hard, dry, pulse quick and hard, tongue furred, belly slightly tympanitic—and she was unable to move, and remained all the time upon her back; there had been no discharge of the water, no hæmorrhage, and the paroxysm had continued

from 3 o'clock and lasted till 9 o'clock. An examination discovered the neck of the uterus hard, os uteri closed, but excessively tender to the touch. After the contractions the neck of the uterus would assume its natural soft and pliable feel. The treatment was the same as previously ordered—and she remained comfortable till half past nine P. M. The next day, when I saw her, firm contractions had occurred, and her pulse slightly accelerated, skin rather dry, and she was talking incoherently at intervals. Tart. emetic ¼ gr. every 2 hours. She was not seen till 12 o'clock the next day, when she was lying perfectly quiet on her back, looking vacantly, pupils dilated, mouth closed, pulse 90, the contractions of the uterus had ceased since last evening. At 4½ P. M. I was sent for, saying she was dying, but I did not see her till 6 o'clock, when she had passed into a state of stupor, lying on her back, with limbs extended, but no stertorous breathing. Pupils dilated and did not move by the light, totally insensible. At this stage of the attack, Dr. Boyd saw her with me, and advised the continuance of the remedies that had been given; and 20 hours from the first incoherence of speech, she recovered, though slight paroxysms ensued afterwards, which were quieted; and she passed to the full period.

Remarks.—I have styled this a case of Rheumatism of the Uterus, differing, as I conceive it does, materially from any case of false pains, neuralgia or premature labor. I incline to this opinion, as false pains never come on so suddenly; the contractions so severe and of such duration, the tenderness so great and diffuse, the inability of the patient to move, and unwillingness to do so, the extreme anxiety of countenance (the sympathy of the brain so great as to produce convulsions), the screams of the patient so violent and the paroxysms so frequent, the desire of the patient so certain that the child must be delivered, the os uteri so excessively tender as to induce the patient to scream out with the pain, all are symptoms that are so totally different from false pains as to make me believe that there is no similarity; and the convulsions that ensue do not differ in any respects from the cases reported by McLeod, Budd, and others, where the brain had appeared to be sympathetically affected through rheumatic pericarditis, and differing from those cases which are in connexion with rheumatism of the synovial membrane without pericarditis. The treatment adopted was the same. Its similarity to neuralgic pertiritis I think cannot be drawn from the diffuse character of the tenderness and not in certain parts as the iliac, hypogastric and inguinal, the hard and firm contractions of the uterus, the want of much tympanitis, and the frequency of the paroxysm. From neuralgia, I think it will be conceded that it differs; for in neuralgia the paroxysm, when severe, continues uninterrupted for some time, and after it ceases it seldom returns but after an interval of some hours or days, and is not of an expulsive character, nor are profuse perspirations noticed. With this short distinction, therefore, of the case, and its concurrence with the descriptions so fully and ably drawn by Wigard, Carus, Schidtreller, Haase, Welter, Siebold, Busch, Joerg and Moser, I am disposed to believe it a case of Rheumatism of the Uterus, and so consider it.

Tympanitis Abdominalis —On the evening of June 10th, 1844, I was requested to visit a young man who had been stabbed near my residence, and whom I found lying on the floor, his wound exposed, which was on

the left side, and a slight discharge of blood flowing from it; the wound measured 1½ inches in length, and perforated the cartilages at the junction of the 8th and 9th rib, in an oblique direction, being in a direct line from the nipple, and measuring 3½ inches from it. A small probe passed with ease through the cartilage to the distance of over 2 inches, and, as I supposed and believed, perforated the peritoneum. The wound was drawn together and a ligature introduced, and adhesive plasters applied. He complained of no pain, except a slight smarting around the wound—no vomiting, and no pain on pressure. His bowels were regular, and he had not eaten anything since his dinner. He was directed to remain perfectly quiet in the horizontal position. He slept well during the evening, and was seen at 6 o'clock the next morning. He remained at this time the same as last night, and continued to remain easy till 3½ P.M., when I was sent for to see him immediately as he had swollen very much at the lower part of the abdomen, and was very tender. I had seen him at 12½—three hours previous, when he appeared as well as in the morning at 6 o'clock. I found his pulse had risen to 110, small and tense, skin hot and dry, tongue slightly furred, respiration 30 per minute, abdomen tympanitic, and swelled as high as the umbilicus. 16 oz. of blood were abstracted, when he fainted, and he was directed to take hydr. s. mur. et p. opii, two grains of the former with 2 grains of the latter, every two hours, leeches to abdomen, to be followed afterwards by poultices or bladders of hot water to the abdomen, barley gruel or water as drinks.—9 P.M., no improvement, abdomen more tympanitic and larger, and at this time he complained of *no pain*, and said he felt very well.

June 12, 6 A.M., slept tolerably well during the evening, tongue cleaner, pulse 98, skin not so dry, respirations 36, abdomen not reduced and tympanitic, no pain, decubitus dorsalis. Treatment:—Hops to the abdomen, pulv. opii, 1 gr. every 2 hours. 6 P.M., tympanitis increasing, slight pain, and skin hotter and dryer, leeches and fomentations. 8 P.M., enema, had a free motion, and no discharge of air with it; the bougie was introduced high up, but no gas passed, and the bowels were natural in color, and of soft consistence.

13th, 10¼ A.M., tympanitis increasing, pulse 104, skin natural, tongue slightly furred, talks with ease, respirations natural, passes urine easily and in usual quantity.

4 P.M., has increased still more in size, &c., he measured around the chest on a line with the nipple 37 1-2 in., natural size 32 in., around the umbilicus 34 in., intercostal spaces dilated, clear and resonant as high up as the 4th rib on both sides, heart heard pulsating over the whole abdomen, and more on the right side than the left, maximum of sound 1 1-2 inch above the nipple, and one inch to the left; the ribs are only as far as the 4th rib movable; distance of the wound from the nipple 5 1-2 inches, and 2 inches from direct line; decubitus dorsalis; complains of no uneasiness of the head, no pain, but disposed to sleep; respirations 26, pulse 104; says he feels better, skin natural, and has been changed to a cot without pain; continue same treatment, has taken 16 grs. opium, thus far.

14th, continues the same, but has increased much more in size.

9 P. M., Dr. J. Kearney Rodgers saw him with me, when he measured around the thorax 39 in., abdomen 38; slight perspiration, pulse 96, skin natural, and no pain—treatment continued, 1 gr. every hour.

He continued to improve under the use of this treatment, till the 18th; and was, on the morning of that day, as he said, "nothing the matter with

him, and he felt as well as ever," and was reduced to 35 in. around the chest and abdomen: during the last two days, he had taken for nourishment chicken and beef tea. At 4 P. M., I was requested to see him immediately, as he was much worse. I found him in intense pain, hands and feet cold, pulse small and feeble, eyes appeared sunken, and diarrhœa; he had increased to 40 inches around the thorax and abdomen. Stimulants were given every hour; he passed a very restless night, but was better the next morning, when Dr. Rodgers again met me in consultation; his pulse was 104; belly not quite so large; very tympanitic, and the sounds elicited by percussion were audible in any part of the room, and as resonant as though they emanated from a drum; treatment continued till the evening, when *paracentesis* was performed, and nothing but *air* escaped, which possessed *no fœtor*, and occupied 15 minutes in passing out. At this time his intellect was clear, and it remained so till his demise, which took place the next day at 2 o'clock.

Post-Mortem.—As I was unable to attend the *post-mortem* before the Coroner's Jury, it was made by Dr. Busteed, in company with Dr. Beales—(Gorham.)

The wound had penetrated through the walls of the abdomen obliquely upwards, having passed through the cartilages of the ninth rib at its junction with the eighth. The internal wound measured $\frac{3}{4}$ inch, and penetrated immediately below the attachment of the diaphragm, the anterior and cardiac portion of the stomach about two inches from its cardiac portion. The wound in the stomach was about $\frac{1}{4}$ inch in length and was slightly united; the stomach contained about 8 $\overline{3}$ of dark, brown fluid; mucous membrane healthy, omentum scanty, much inflammation, and recent adhesion of the entire intestines. The abdomen contained about two pints of fluid, the entire peritoneum in a state of inflammation, and adhered to the intestines; lungs and heart healthy; liver paler than natural; gall-bladder and spleen larger than usual.

Remarks.—The subject of Pneumatosis is one of no little interest, and it is somewhat singular that it has not been more thoroughly investigated, whether in the normal or abnormal tissues.

Cases of idiopathic tympanitis abdominalis have been recorded by Heister, Cambalusier, Stœrck, Schuler, Bell and others, though Abercrombie, and other authoritative authors, as Elliotson, Hodgkin, &c., have entered their denial. Nor are cases of secretion of air into the thorax wanting, as they have been attested by Frank, Laennec, Cambalusier, Graves, Portal and others. The pericardium has been occupied with gas, as Albers, Testa and Portal have adduced; the blood-vessels of the brain have not escaped, and have been observed by Morgagni, Lieutaud, Sebastian, Cardogeas, Baumes, Frank, Villermé and Ribolli de Gex; the urethra, the uterus, and even the gall bladder have been noticed as containing it.

I think it will, therefore, be conceded, from the numerous instances recorded, and attested by such authorities, that the tissues of the living body, as well during health and disease, do separate gases from the blood analogous to secretion, is a fact fully and indirectly admitted by most, if not all modern physiologists, though still there are many who will not yield their belief on this point. I apprehend, therefore, that the most important, and still to appearance undecided question with the profession, is whether the serous membranes do secrete gases, or whether it has

been secreted by the mucous membrane, and through endosmosis passed into the serous cavities. Those who do not give credence to the secretion of the gas by the serous membranes, find a ready, plausible, and, to appearance, true solution, under the law of the penetrativeness of fluids, so ably advocated with so much ingenuity, and skill, and research, by Dr. Mitchell of Philadelphia, and which may explain many phenomena hitherto imperfectly understood; affording new views, as it does, of the theory of respiration, and accounting in that process for some well ascertained facts for which there previously existed no adequate explanation; showing how emphysema and tympanitis may happen without secretion of gases or lesions of tissue, and how a spontaneous cure may be produced; leading also to the probability of the existence of gaseous matters of various kinds in almost every part of the animal frame, residing there molecularly, and not "*en masse*," but susceptible of being collected into the great cavities or the cells of the tissues or blood-vessels by mechanical or electrical influence, or the attractive interstitial agency of other masses of air.

This case is interesting, not only as adding, as I conceive, another instance of pneumatosis, but as showing the large quantity of opium (115 grs.) that had been taken by the patient during his sickness, producing at one time a great diminution of the secretion, not affecting the brain at any time, and retaining his faculties to the last moment, producing no heat of skin, nor excitement or depression of pulse, and every function of the system appearing natural till the 18th, prior to his death. To some this treatment may not be deemed prudent, but when I am sustained by the authority of Hamilton, Armstrong and Stokes, I have no charge of impropriety to bring against myself.

Case of Pleurisy (*terminating favorably by profuse perspiration*).—I was requested to visit Mr. McD., May 17, 1844, aged 30, who complained of a severe shooting and cutting pain in the left side, with difficulty of breathing freely, a short hacking cough, no expectoration and rigors. He had been complaining in this manner for several days. The auscultatory signs gave evidence of pleurisy, with effusion, as high as the 3d rib, and the respiratory murmur very feeble at the apex of the lung. He was treated according to the usual method for two weeks with very little benefit, and during this time the patient had lost but a moderate proportion of flesh, when on the morning of the 14th day of the disease, profuse perspiration set in which continued without any abatement till the end of the 5th day, and he was obliged to be changed numerous times during the day, being literally drenched with perspiration. The sweat began to moderate on the 6th, and terminated on the 7th with no effusion in the chest, and feeble respiration audible over the whole lower portion of the left side, with a slight mucous rattle. On the evening of the 3d day the effusion had almost entirely been removed; still the sweat continued till the 7th, when he was reduced to a mere skeleton.

Case of ununited Fracture of five years and a half duration undulated.—Mrs. H., aged 65, married, had a fall five and half years ago last fall, down a pair of stairs striking on the tibia of the left side lightly, but with more force on the knee. She complained of no pain in the tibia, and had severe pain in the knee, which increased much in size, and confined her to the bed for some months, and afterwards was obliged to use

crutches, which she has never relinquished. Several medical gentlemen had seen her, and particularly Dr. Sweet, the bone-setter, who manipulated on the knee and lower joints several times, and insisted that the bone was reduced, believing it to be a luxation of the knee. On the 8th of January, 1845, I was requested by a physician to visit her with him on account of the enlarged state of the knee joint. On inspection and a slight manipulation, I concluded that it was one of hydrops articuli. The limb was very much flexed, and she could not make any extension with it, the contraction was so rigid. My attention was only drawn to the knee, no other part of the extremity being suspected as being injured or diseased. She was placed under the tinct. iodine externally, and hydriodate potassæ internally. There was much improvement in the knee, so that on my third visit she could move the limb freely, and extend it out as far as the right limb; the effusion had all been absorbed, and during this visit, on carrying my hand down the limb to notice the effects of the tinct. iodine on the cuticle which had left it in a state of desquamation, I happened to feel a slight depression on the tibia 3 in. from the internal malleolus, and with a slight rotation discovered a crepitus at that point, and which was satisfactorily corroborated by the use of the stethoscope. The fracture was transverse, and would thus account for there not being any retraction at the end of the tibia, and also for her being able to stand upon the limb occasionally. Friction has been instituted with a proper apparatus to produce irritation of the ends of the bones, so that it can in time be properly adjusted. Should this not succeed, either the seton or the excision of the ends of the bone will be put in requisition.

Cases of Aphonia, by Isaac E. Taylor, M. D.—Since the last meeting of the Society, I would state that twelve cases of aphonia, several of which resulted from cold, had been treated by the application of the nit. argenti to the superior opening of the larynx, and *into* the larynx by means of the probang, with a piece of sponge attached to the end of it. The duration of the aphonia varied in all the cases; generally it had been from one to two months, some three or four months, and one of seven or eight months. From the short time since the application, no positive conclusion in the cases of the beneficial and curative effects could at this time be positively ascertained. Three had been perfectly relieved after the third application, five did not return, and the rest were under treatment. Three of them were cases of laryngeal phthisis, and one of syphilitic laryngitis of seven months. The cause of the five patients not returning, is to be attributed more to the disposition the poor have to neglect any advice that may be proffered them even for their benefit. Therefore these cases cannot be fairly included as among the number that could militate against the application. Two of the five were materially benefited by the various treatments that had been adopted. The three cases of laryngeal phthisis had been only partially relieved.

Case of Aphonia of three months' duration—six applications—cure.—Mrs. A. presented herself to me for treatment the latter part of February, for loss of voice, which had existed for three months, and which she had incurred from her exposure to the cold air after a party. A catarrh had existed two or three weeks previous to the aphonia, which came on during the morning. She could not be heard across a small room—there was no

fever—no decided redness of the pharynx—the epiglottis not perceptible to the sight, to the touch thick and erect, and the opening of the larynx small—a variety of treatment had been gone through with, but without any benefit; her present situation was, she had no expectoration—no fever—but a slight smarting sensation in the larynx—deglutition painful at times—not much pain on pressure. Under these circumstances the topical application of the nitrate of silver was deemed the best course of treatment to adopt, of the strength of 45 grains to the ounce of water—six applications were made, when her voice was perfectly restored.

Case of Aphonia, one month's duration—cure immediately—Case 2d.—Miss A. B., aged nineteen, asked advice for a loss of voice which had existed four weeks—she had had an acute attack of catarrh with some fever two weeks previous, when the aphonia took place, which remained the same, at the time I saw her, as it did when it first showed itself, and without any amelioration at any time. Pharynx natural—tonsils the same—no soreness or pressure externally—no fever—deglutition not very painful, though at times it feels sore. The nit. argenti 132 grs. to the ounce was used—and after a second repetition at the same sitting, she spoke as well as any person—and continued to do so till she left the city three days afterwards. I have noticed not less than five instances where the aphonia had been dissipated instantly from the prompt and immediate application of the caustic. I cannot call to mind a season where so many affections of the throat and especially aphonia, and abscesses of the internal faucus in various situations, have occurred as this winter.

Case of Aphonia of three months of Laryngeal Phthisis and during the course of Phthisis, three applications—cure of the aphonia, phthisis progressing—Case 3d.—Mrs. M. presented herself to me for my advice in her case, not especially for the aphonia, which had continued three months, but for phthisis, which she had labored under for six months—having at the time I saw her all the marked natural symptoms of phthisis well advanced—cough, hectic fever, chills and night sweats—purulent expectoration—great dyspnœa—inability to walk but a short distance, and could not ascend up stairs without afterwards sitting down to recover her strength and health to enable her to state her exact situation. The physical signs were cavities in both lungs—the voice was so entirely gone as to require me to hold my head close to hers to understand what she had to communicate. Pressure upon the larynx gave her some pain and soreness—deglutition painful—and she only took fluids, being unable to take solids. I did not expect much benefit from the treatment of the nit. argenti, but I conceived it proper to make an application with a solution of 30 grains to the ounce. Three applications were made, and the last of the strength of 60 grains, and at her fourth visit, at an interval of ten days from the last application, she spoke as clear as myself—her respiration more free—her strength much improved, and she was delighted with the effects of the treatment.

Remarks.—Since this report, numerous cases of aphonia resulting from cold of several weeks' duration, and other affections of the larynx, where various remedies have been used, have passed under my notice, both public and private, and many of them have been perfectly relieved—in two instances *immediately*, although the *aphonia* had existed from four

to six weeks. Two of the three cases of laryngeal phthisis have entirely recovered their voice, and say that they have improved much in strength, and do not have as severe perspiration during the night. The syphilitic laryngitis had more than a dozen applications, and several have seen the beneficial effects that it has produced upon the disease, though at times it is partially aphonic still. After the twelfth application one day she spoke with a clear voice the greater part of the morning. With the success that has attended the treatment of these cases, I think it will not be denied that there is a marked curative effect in the local application of the nit. argenti, though it may be denied that it is not made directly into the larynx, and the only test I conceive therefore, on this point, is, the *feeling* of the probang in the larynx. Cases, it is true, may occur where it might be seen, but they are rare. As an instance of the former remark, I would adduce a case where two medical gentlemen were present when the application was made, and who had not yet yielded their belief to its direct application into the larynx, though it had been made several times in their presence; the sponge was introduced into the larynx, where the probang retained till they both *had felt* it positively and distinctly, and they then gave their positive and satisfactory assent to the truth of the case. The larynx in this instance was large, the epiglottis small, the tongue short, and its position not deep, nor was there the slightest evidence of strangulation during the whole proceeding.

To MM. Trousseau and Belloc is the credit due of bringing this method of the application of the nit. silver to the notice of the profession, and it has received the sanction of, and is practised by, Cusack of Dublin, Vance of London, and other gentlemen, and was adopted by Sir Charles Bell. I am aware that much doubt has been entertained respecting the direct application into the larynx, by the profession in this city, and it appears to result from the *old* established opinion, that if a drop of water should pass into the larynx it will produce excessive coughing and strangulation, and perchance asphyxia. How many instances, I could ask, have there been of substances that have passed into the larynx, and yet asphyxia has not resulted? nor are we to forget that the bougie has been passed down into the bronchia, and that Aretæus* was accustomed to blow fine powder into the larynx. Strangulation has not resulted in this instance to such an extent as to produce such an amount of fear as to preclude its further application, and if so, why should we be so startled at the application of the nit. argenti by means of the probang? Feeling therefore, only, in these cases is believing, and one's testing it himself. In answer to the questions that might be propounded that convulsive motions and strangulation must ensue, I can only say, as far as my experience has gone, I have observed few cases where even the slightest strangulation had been noticed; it producing sometimes, it is true, vomiting and coughing, though not excessive. But the convulsive motions, I apprehend, are not to be entertained, through the fear of its passing directly into the larynx only, but as Muller testifies in his Physiology, "That local irritation of any part provided with mucous membrane, is adequate to excite the respiratory system of nerves to morbid action, so as to produce convulsive motions. Irritation of the mucous membrane of the nose produces sneezing; irrita-

* *Sprengel*, in his "History of Medicine," states that Hippocrates was in the habit of introducing a tube through the nostrils into the trachea, *Paulus Æginita*. Translated by W. Adams, p. 466, Ed.

tion in the pharynx, œsophagus, stomach or intestines, excites the concurrence of the respiratory movements to produce vomiting. Irritation of the mucous membrane of the larynx, trachea or lungs, or even itching of the eustachian tube, excites coughing." Respecting the method of applying the probang, I would with diffidence dissent from MM. Trousseau and Belloc in the manner of its application, and instead of carrying it to the back of the larynx, and then waiting for the larynx to be elevated, I have carried the instrument sideways over the base of the tongue, the sponge looking to the right side; and as the tongue is requested to be protruded, the epiglottis becomes erect, and as the larynx is elevating, the sponge, if not too large, is brought to a level with the superior opening, and passed directly into the larynx, and the fluid is expressed by the quick contraction of the posterior muscle of the larynx, which contraction is distinctly perceptible to the fingers of the operator, and with a slight motion or the request to protrude the tongue, the probang is removed with ease. The operation is made especially easy when the epiglottis can be distinctly seen and felt, the root of the tongue not deep or broad, or thick and elevated; nor the tongue long; whilst in others the tongue is so very long as to preclude the epiglottis from being distinctly felt; and again so deep is the larynx in other cases, that it cannot be reached with the finger; nor must we forget the difference in the size of the opening of the larynx, that we may judge what kind of instrument we are to use in each case.

The strength of the solution used is usually to commence with 40 grs. increased up to 60 grs. to the oz. of water, though I have used it as high as 132 grs. to the oz., and Trousseau and Belloc as high as 160 grs. to the oz. When the solution is used of this strength, it gives rise to so much irritation for several days, as to deter the patient for a while to have a second application, and its results are not so favorable.

It is a truth that I think will be conceded, that men in every current age, look on all new doctrines with distrust and even suspicion, as interfering with this accommodating and somewhat prejudicial principle, that knowledge is truth and power. But when discoveries, ripened into real benefits, have first upset and then supplanted old philosophy, men then wonder how their previous philosophy could have lasted so long and been maintained so satisfactorily. It is not, however, the province of the new age to dissect the ingenious arguments of the ancients in order to keep up their fabrics, but to exert itself in the field of inquiry, and if possible, discover what has escaped former ages; and this being done, to reform the ancient, or make a new philosophy more suited to its wants.

[In order to understand the application of the following remarks of Dr. Horace Green, we may state that considerable scepticism has existed in the minds of many of the members of the profession, in this city and elsewhere, in relation to the practicability of applying caustics to the internal surface of the larynx.]

With regard to this question, said Dr. G., of making topical applications into the larynx, to which Dr. Taylor has alluded, in the cases just reported, I will take this opportunity to remark, that, in the minds of many intelligent physicians, who have seen the operation, there remains no doubt whatever of its entire practicability.

It will be recollected, by many gentlemen now present, that several years ago, I called the attention of the Society to this subject. I then exhibited an instrument, by means of which topical remedies were ap-

plied; and reported some cases of laryngeal disease, where permanent cures were effected by this mode of treatment. But there was manifested, at that time, by the members, such a degree of scepticism on the subject, that I have since refrained from bringing the matter again before the Society. But, in the meantime, I have been treating my patients, who have suffered under laryngeal and bronchial affections, by this method, and with an amount of success, which has been in the highest degree satisfactory. During the last six months, upwards of fifty cases have come under my care, and in the treatment of these cases, in more than five hundred instances, have topical remedies been introduced, below the epiglottis, into the laryngeal cavity! Nor have these things been done in a corner, for, from among our most respectable physicians, some twenty or thirty, at least, have, from time to time, been present, when these applications have been made. Many of these gentlemen have since adopted this method of treating these diseases; some of whom are now present, and are willing, I doubt not, to testify, not only to the practicability of the operation, but to the success which has attended this plan of treating laryngeal disease.

In many instances, where chronic affections of the throat have existed for years, and have been attended with ulceration, with hoarseness, and, in some cases, with complete aphonia, of many months' standing, the parts have been restored to a healthy condition, and perfect vocalization re-established.

But, whilst many medical gentlemen of this city have been present, and have witnessed the introduction of a strong solution of crystals of nitrate of silver into the laryngeal cavity, I am not ignorant that there are others, who, judging from analogy, and the experience of the past, entertain the same opinion that has been expressed this evening, namely, that it is altogether impossible to enter the glottis in this manner.

With all proper deference to the opinions, in ordinary, of these gentlemen, I would remark, that mere *opinions* in medicine, however extensive the experience on other subjects, of those by whom they are entertained, cannot be received, at the present day, in opposition to *facts* in medicine. Wherein, I would ask, consists this impossibility of entering *intentionally*, a tube, or cavity, which has been, in so many instances, entered *accidentally?* The epiglottis, or valve to this opening, except at the moment of deglutition, is always, by virtue of its own elasticity, retained in a vertical position; and it is well known that foreign bodies have frequently found their way, accidentally, into the larynx and trachea. Baron Larrey* has recorded the fact, that in attempting to pass the elastic tubes, for the purpose of conveying liquid nourishment to the stomachs of soldiers, who, from wounds of the neck, were unable to swallow, "the tube often went into the larynx, instead of into the œsophagus," and that when this happened, "the mistake was not discovered by any particular sensation about the glottis."

F. Ryland, in a "Treatise on Diseases and Injuries of the Larynx," says, that "an elastic sound, introduced into the larynx, does not give rise to any peculiar sensations that will indicate the occurrence with any degree of certainty."† Dr. A. H. Stevens, also, of this city, has assur-

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* Relation Chirurg. de l'Armée d'Orient.

† Treatise, &c., p. 241.

ed me that in attempting to introduce the tube of the stomach pump, it has frequently passed, accidentally, into the larynx, without exciting any marked irritation. And yet these gentlemen, who have neither made the attempt, themselves, nor have seen it attempted by others, assert, in the face of all these facts, that the introduction into the larynx, of an instrument formed for the purpose, and guided by a hand endeavoring to effect the passage, "is altogether impossible!"

I am not surprised, however, that gentlemen, who ground their opinion upon the known irritability of those parts, should question the practicability of the operation. Dr. Taylor, himself, avers, although he had seen several of my patients, who had been successfully treated by topical medication, that he was altogether incredulous on the subject, until he had made the attempt himself, to enter the larynx, and was successful.

The well known fact, of the great irritation produced upon an individual, by the accidental introduction of a morsel of food, a drop of tea, or of any other fluid, below the epiglottis, is always adduced as an unanswerable argument against the practicability of introducing strong, medicinal agents into the laryngeal cavity. But this plan of reasoning from analogy is one not applicable in this case:—for it is a singular, but most interesting fact—one that has been fully established by repeated experiments—that the introduction into the glottis, of a sponge saturated with a solution of crystals of nitrate of silver, of the strength of forty, fifty, or even sixty grains to the ounce of water, does not produce, ordinarily, as much disturbance as the accidental imbibition into this cavity, of a few drops of tea, or even of pure water!

Among the patients who have come under my care within the last few months, have been several intelligent physicians, who have been sufferers from laryngeal disease. With these medical gentlemen there has not been, nor could there be, any uncertainty as to the *locality* of the applications; and they have frequently, and individually, assured me of this fact; a fact, too, which has been often observed by most of my patients; that, after the employment of topical medication, no taste of the medicated fluid would be observed, until matter, by coughing, was expectorated from the air passages, when the peculiar flavor of the nitrate of silver—a most acrid bitter—would be perceived; and this would continue to be observed, whenever the individual expectorated, for many hours after the operation.

I have made these remarks, not from any desire to enforce upon the attention of this Society, any method of treatment, or any peculiar views of my own—for this subject was not brought forward by me—but because I wished to explain, and defend, a plan of treatment which has met with opposition, and about which misapprehensions have existed, not with those who have inquired into its merits, or have tested its practicability, but with those who have formed their conclusions more from preconceived opinions, than from inquiry, and established facts.

Dr. *Green* then proceeded to read the following paper—

Allusion was made at the last meeting of this Society, to the *nature* of the different deposits which are sometimes found imbedded in the tonsillary glands; and to that, also, of the morbid secretions which, at times, are developed on the surface, or in the substance of the laryngeal mucous membrane; and as a difference of opinion existed in relation to the character of these marked products, I have taken some pains, since

our last meeting, to examine the views of several different pathologists on this subject.

The tonsils, it is well known, are composed almost entirely of a great number of mucous follicles, loosely bound together, or aggregated into a mass, and surrounded by, or deposited in, cellular tissue. The follicles, in this situation, are subject to the same diseases as are those of mucous membranes elsewhere; namely, to inflammation, enlargement, induration, and softening. "The fluid which these follicles secrete," says Dr. Tweedie, "may be converted into pus, or into a peculiar concrete substance resembling, in consistence, *tuberculous matter;* or into calculous concretion varying in size from a millet seed, to that of a garden pea, or even larger. These various marked secretions may be contained in a single dilated orifice, or in a cavity formed by the union of several lacunæ.

Mr. Yearsley, of London, who has recently published an interesting work on the morbid condition of the tonsils and uvula, remarks that in chronic disease of the tonsillary glands he has not unfrequently found the hypertrophied gland filled with solid matter, of a dirty white color, which, from its calcareous appearance, he has considered not unlike the deposit on the teeth, and supposes it may originate in the same way as the *crusta petrosa*, from the salivary and other secretions of the mouth. In several instances, the same author states that he has found calcareous deposits imbedded in the centre of the diseased growth; and in one instance a calculus closely resembling a piece of rock coral in its arrangement.

With regard to the morbid secretions of the mucous membrane lining the upper air passages, I have at different times ventured to express the opinion that tuburculous deposits are sometimes found on the surface of the membrane lining the larynx, or collected in the mucous follicles of this cavity. I am perfectly aware of the high authority opposed to this statement, and I should not presume, from a limited experience, to express such a heretical opinion, if I were not sustained, on the other hand, by authority not to be altogether disregarded.

In M. Louis's work on Phthisis, published in 1825, he declared that not "in a single instance had he met with tuburculous granulations in the substance or on the surface of the epiglottis, larynx, or trachea." In the second edition of his Researches, published eighteen years afterwards, and now just issued by the "Sydenham Society," Louis reiterates the assertion, though not as positively and unconditionally as in his former work. He says, from his additional experience, "it may be regarded," in his opinion, "as a law of the system, that tubercles, so commonly and abundantly developed in the lungs, are not produced, at least *after the age of fifteen*, in the upper air passages; if such an occurrence does ever take place, it can only be regarded as a singularly rare exception to the ordinary course of things."*

Authority on this subject, coming from such a source, claims the highest consideration, and one of limited experience may well hesitate to entertain or express an adverse opinion. But it is the prerogative of all to investigate, and no opinion in medicine should be received as an established principle which depends upon the authority of a single individual, however exalted that authority may be.

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* Researches on Phthisis, by Louis, p. 45. Sydenham Edition.

The members of the medical profession in America—a large proportion of them, at least—are quite disposed to receive the views of the French pathologists as established truths, about which further investigation is considered medical heresy! A few years ago, it was promulgated by the French school of pathology that a morbid condition of the mucous glands of the small intestines was the essential characteristic of *typhus fever;* and this doctrine was received by a large class of the medical profession in this country as an axiom in medicine. So, too, the physiological system of Broussais; a system having enough of truth mingled with it to give it an air of great plausibility, was esteemed by a part of the profession in America, as a revelation in medical science. But it has fallen, says a late medical writer, before close observation and logical reasoning, and left the followers of Broussais, comprising almost the entire existing generation of French physicians, at sea without a compass.*

In 1838, Trousseau and Belloc, in their work on Chronic Laryngitis, declared that the "exploration of the glottis" in the living subject, is physically impossible; and few have dared, since that declaration, to point a finger to the glottis! although it and the larynx may be explored, with perfect facility and impunity, down even to the vocal ligaments!

The same disposition obtains with many of our profession, to receive, unquestioned, the opinions and conclusions of Louis on the subject under consideration. Others, however, whose opinions should have some weight with the profession, have questioned these conclusions; among these M. Andral, in 1840, declared that the mucous membrane of the larynx is, frequently, the seat of tuberculous deposits;—an opinion, I believe, to which he still adheres. In Dr. Williams's work on Pulmonary Consumption he remarks:—"If tubercle be, as we suppose, a degraded condition of the fibrin or nutrient principle of the blood, we may expect it to be deposited wherever the nutrition or the secreting process is carried on;—wherever lymph or pus is occasionally found,—wherever, in short, blood-vessels run. Tuberculous matter," he adds, "has been met with in coagula in the heart, spleen and blood-vessels, and it may be deposited in tissues and on surfaces, independently of irritation of these parts."

M. Tonnelé, a writer to whom Louis alludes, in his Second Edition, assures us that he has found tuberculous productions in the cavity of the larynx, among which were slightly softened tubercles, which had produced ulceration of the mucous membrane.

Dr. Carswell declares "that the mucous system is by far the most frequent seat of tuberculous matter;—that the presence of tuberculous matter in the larynx, in the trachea, and its larger divisions, is not often observed," but that "he has met with it in a few instances in the follicles of these parts, and occasionally in the saculi laryngis;" and he then makes this pertinent inquiry:—"May it not be owing to the facility with which tuberculous matter escapes, that we do not find it accumulated on the mucous surface of the larger bronchi, or the trachea, or that of the intestines?" In short, Dr. Carswell supposes that tuberculous matter may often be secreted upon the free surface of the membranes of these parts, but that not being entangled or confined in any mucous crypt, it is removed

* British and Foreign Medical Review.

as soon as it forms. This view of the subject, in my opinion, explains the whole difficulty of the matter. M. Louis has not met with tuberculous deposits on the surface of the epiglottis, larynx or trachea, in adults, simply because all morbid secretions, and especially those of inorganizable matter, operate as irritants upon these parts, and are thrown off as soon as formed. This view of the subject is sustained by the fact—a fact which Louis recognizes—that tuberculous matter is frequently found filling the smaller bronchii; being secreted upon the mucous surface of the terminal branches, it is there arrested while it is thrown off from the free surface of the trachea and larger bronchii. The opinion now advanced is also corroborated by another important fact. It has been shown by M. Tonnelé, and admitted by Louis, that before the age of fifteen tuberculous matter may be deposited in the larynx; or, in other words, there may be lodged in the upper air-passages of the child, while the expulsive powers of the chest are feeble, morbid secretions, which are thrown off, as soon as formed, when those powers are strong, as in the adult.

Sustained by these facts and conclusions, I am still of the opinion that, in several instances which have fallen under my observation, I have found in enlarged mucous follicles of the upper air-passages, and imbedded in the tissues of these parts, morbid deposits, presenting all the physical characters of true tuberculous matter.

Dr. Campbell Stewart reported a case of spasm of the intestine which terminated fatally. A mulatto female, aged 55 years, a cook, was taken in the morning with a violent pain in the left lumbar region. Dr. S. saw her shortly afterwards, her pulse was scarcely perceptible, and the pain intense; stimulants and anodynes were administered in conjunction with mustard poultices, a blister and warm baths—temporary relief was afforded, but the pain recurred in the evening with increased severity, and accompanied with a cold sweat, pulse still very feeble. Stimulant treatment was again continued, and a dose of calomel, with 3 grains of opium, administered. On the following day, found that the patient had been removed, contrary to directions, from the house in which she was taken sick, to her own room, which was a mile distant. When seen, she was in a state of collapse, and died in the course of the afternoon, 38 hours after being first taken sick; two small alvine discharges occurred previous to her decease.

Post-Mortem.—Brain not examined; lungs and heart healthy; stomach and upper part of intestinal canal, somewhat inflamed; liver and kidneys, in a normal state; spleen, very firm, and reduced to one-fourth its natural size. The mucous membrane of the descending colon was much congested, and softened about the sigmoid flexure, directly above which there was a collection of more than a pint of soft, yellow, feculent matter (the matter discharged immediately before death, consisted of small, hard, and black masses). The uterus of this patient was found to be converted into a solid schirrous mass, fully as large as an ostrich egg.

Dr. Stewart likewise stated, that he was called in consultation to a case of peritonitis resulting from an inguinal hernia, which had been reduced by taxis; enemata, purgatives, and blisters had been freely used; seemed impossible to procure an evacuation of the bowels. Patient appeared to be sinking very fast; low, feeble pulse; great tympanitis, anxious expression of countenance, and difficult respiration; blister had

been applied 24 hours, without producing vesication. Dr. S. recommended 1 gtt. Croton oil, every hour: 10 drops were thus taken without producing any effect whatever. Twelve drops of the oil were now directed to be rubbed around the umbilicus, and the patient was left in an almost hopeless state. Two hours afterwards, was sent for in haste; found the patient considerably relieved: he had had a violent rumbling of his bowels soon after the external application of the croton oil, which was followed by the discharge of two chambers full, of black, tarry matter. After this, continued to improve gradually, and finally recovered.

Cases of Chronic Hydrocephalus, with the Post-Mortem appearances, by P. L. Vandervoort, M.D.—The subject of the following case—a colored child five years of age—was seized, for the first time, about the middle of August, with convulsions, which continued six or eight hours, and then passed off. She remained comparatively well—with loss of speech—for about five weeks, when she was attacked as before. The convulsions were general, and there was great flatulent distension of the abdomen: there was also hemiplegia of the left side. The fingers now slowly turned in upon the palm of the hands, and the hands were bent at a right angle with the fore-arm: the feet were turned upwards. She had more or less fever, with considerable heat of the head, and was extremely fretful; emaciation progressed daily. After another interval of five or six weeks she was again attacked with convulsions, and in 36 or 40 hours she died.

Post-Mortem Examination, twenty-four hours after death, assisted by Dr. Roberts.—The body was much emaciated. On removing the calvarium, the brain presented a highly congested appearance; its surface was spread over with a glutinous liquid, and there were several patches of lymph on the margin of the longitudinal sinus. Several ounces of serum escaped when the brain was being removed—there was no serum in the ventricles.

The substance of the brain was much softer than usual, the handle of the scalpel entering with scarcely any resistance. A large patch of the inferior portion of the left lobe of the cerebrum was reduced to a semi-fluid state, similar to that of soft custard—two scrofulous tubercles, the one larger than a nutmeg, the other a little less in size, were found on the surface of the brain, in its substance. The lungs contained small tubercles,—in the left lung was found one somewhat larger than a black walnut, which was quite firm. The spleen was filled with the same bodies. Liver and intestines were healthy.

Since the above case was reported, two other fatal cases of hydrocephalus have come under my observation, which I will briefly mention. To the first of these I was called about the middle of February—the child, three years old, had then been ailing some weeks. It now had convulsions—was excessively fretful, like the one whose case has just been detailed—was much emaciated, and would frequently put its hand upon its head as if there was pain there. As the case progressed towards the close, the fretfulness of the child increased—its nights were, for the most part, sleepless—it refused all nourishment, except wine-whey in small portions,—the pulse became very rapid and almost imperceptible—convulsions and spasmodic twitching of the limbs were almost constantly present, and continued until its death.

Post-Mortem.—As in the former case the body was much emaciated. Upon attempting to remove the calvarium a large quantity of serum was forcibly driven out of the left ventricle to the distance of five or six feet—a rupture having been accidentally made. The vessels on the superior surface of the brain were more congested than is usual, as was also the substance of the brain: on the under surface of the organ, surrounding the origin of the large nerves, was a distinct layer of coagulable lymph, two or three inches in length and an inch or more in width. No tubercles were found. The contents of the chest and abdomen presented nothing remarkable.

The other case was also recently attended by me. Its first symptom of illness was a tendency to diarrhœa, passing for a few days at a time greenish stools. These were readily checked by appropriate remedies. At this time there was no evidence of any derangement of the brain, but after the lapse of a few weeks the diarrhœa returned, and the child was observed to put its hand to its head and to rub it—like the other it too became very fretful, and passed restless nights. About twelve days prior to its death its face presented a singular appearance; on its cheeks and temples were large spots of a dark green and purple hue, very similar to that which follows a blow. The hands and feet, too, were much swollen, purplish and of death-like coldness—the pulse was scarcely perceptible. For more than a week before its death it would take but very little else than cold water. This child was also seized with slight convulsions a few days before its death; there was also some coma.

Post-Mortem Examination.—As in the formercase much fluid escaped during the efforts made to remove the skull-cap. The bones were remarkably thin. The vessels of the pia mater were somewhat congested—the ventricles contained no fluid. The substance of the brain was preternaturally soft; no tubercles were found. The lungs were healthy; the liver was much enlarged; the left lobe extended far across the median line, and the right lobe passed down to near the umbilicus. The whole of it was converted into what is called *fatty degeneration*, a state very seldom seen in so young a subject, it being one year old. The other organs were sound. Both of these were colored children.

ART. VI.—*Fibrous Induration of the Prepuce and Body of the Penis.—Amputation.* By C. B. BARRETT, M.D., of Hallowell, Maine.

THE subject of the following, "Cornelius," was a full-blooded African negro; a man of gigantic frame and strength of body. He measured 6 ft. 4 in. and weighed 218 lbs. All that I could learn of him, was, that about ten years ago he contracted gonorrhœa. At the commencement of his disease, he made the attempt to cure himself according to *his* "country fashion." Under his own treatment, he rapidly grew worse, and continued to do so up to the time of my visiting him—he having concealed his situation from every one. I also learned from him that his penis was much swollen, and that it had been as "large as his wrist for five years," and that it had been several years since he had been enabled

to pass his urine in a "natural way." I visited my patient, professionally, on the 16th day of November, 1837, and on examination, the following distressing appearances presented themselves to my notice: The penis of this poor man had much the resemblance of a tumor, measuring 17⅝ inches in circumference, of a semi-hemispherical form, filled with large watery excrescences, which bled freely at the touch, and contained a frightful fissure or cavity through which the urine passed incessantly, per guttam. The orifice of the urethra had partaken of the morbid growth of the penis, and was nearly two inches in length, by actual measurement, whilst the smallest probe passed up the urethra would be admissible scarcely three inches. The lymphatic glands, in consequence of the advanced stage of the disease, had become seriously affected. They were uncovered by the prepuce and very much enlarged—nearly two-thirds as much as the body of the penis. A peculiar mulberry, or strawberry aspect, was assumed by the penis, probably from the number of small tubercular tumors which enveloped it.

Under all the circumstances, and after mature reflection, I determined on its removal by the knife, as the only possible chance of saving the poor fellow. I performed the operation on the morning of the 19th, in the presence of Drs. Garland and Lee, after the manner recommended by M. Poirson, Chief Surgeon of Gros Caillon, viz. "by introducing a soft flexible sound, some inches longer than the ordinary ones, into the bladder, and directing an assistant to place one hand on the penis, close to the pubis, and to hold the loose end of the bougie and penis in his left." I divided with a small amputating knife, both the penis and bougie. As M. Poirson justly remarks, "the introduction of the instrument facilitates the operation, and renders the search for the arteries more easy." The bougie was removed and its place supplied by a small silver canula, to prevent a closure of the urethra. A compress and the necessary T bandage was all that was required to complete the operation.

4 P. M. A profuse hemorrhage has been going on—in all probability from the cells of the corpora cavernosa.

℞ Cortus quercus albi concisæ ʒ iv.
Aqua Bulliente Oiss.
M Fiat Lotionis, cum colu usa.

Pulse 128—full and steady. Patient complains of a rumbling noise in his left ear—says he feels as "if some one was pouring water from the nose of a tea-pot in his ear."

℞ Muriat. Morph. gr. ⅛. Pulv. Rhei gr. xv. M. pro dosi.

8 P. M. Patient complains of intense pain in the stump—says he believes it to be in a vice. Hemorrhage has nearly ceased. Directed the application of pounded ice to the pubes. Take at bed-time,—

℞ Mass hydrg. gr. viij. Mur. morph. gr. ⅛.

Pulse 100—soft and kindly yielding to the pressure of the finger. Has urinated once since the operation very freely. Says it gave him no pain—if he had not been informed that he had done so, should not have known it. Countenance cheerful and free from anxiety.

November 21st, 9 A. M. Visited my patient this morning, and found him improved in every respect. Says he "slept like a log all night." No pain in the stump. No unpleasant sounds in the ear. Has urinated very freely, since I last saw him—averaging ¾ of a pint each time. Enjoined a strict antiphlogistic regimen, ℞ ol. ricini ʒ iss.

Pulse 92—strong, and moderately full.

6 P. M. Patient still continues to improve. Thinks I am a hard master because I allow him nothing but gruel or boiled rice. Says he is very hungry, and wants something "solid" to eat.

Pulse 86. Soft and yielding. Countenance animated, and expression cheerful. Removed the bandage, and ordered the wound to be washed occasionally with the following lotion—℞ sodæ chlorid., ʒj aquæ fontanæ oj. The incision looked well, and appeared to be healing rapidly by first intention.

Passed urine twice since my last visit. Directed the canula to remain in the urethra, and reapplied the dressing.

November 22. Patient continues steadily to improve—may take arrow root, or sago pudding, and drink freely of slippery elm, or flaxseed tea. Urinates without the slightest inconvenience or pain, and can retain his urine ad libitum. Says he never felt better in his life.

Pulse the same as on my last visit.

November 23. Patient improving rapidly—appetite good, and nature again resuming her functions in a healthy and vigorous manner.

November 30. Unavoidably called away, to patients at a distance; patient has been kindly and attentively taken care of by my colleague, Dr. James Garland. The wound, at this date, has a healthy appearance, and is entirely healed over in a circular form.

Removed the bandages and catheter. Ligatures came away during the night spontaneously. Urinates in a bold, clear and full stream, and without any pain.

Pulse 88, full and moderate—tongue clean and healthy—appetite good.

December 14. Has been under the care of my colleague since my last visit. Dr. G. informs me that my patient complained of painful erections for which he ordered the following—

℞ Tinct. opii, ʒj, tinct. canthar. et camphoræ ā ā ʒss. Take five to ten drops every four hours. The complaint speedily yielded to this treatment, and at the present moment he presents the following gratifying results: Wound is now the natural size of the urethra—is perfectly free from pain of every kind—can urinate boldly and freely, as much, he says, "as when he was a boy."

Directed the use of moderate exercise—a generous but healthy diet, and to wear for some few weeks a suspensatory bandage. Discharged cured, December 16th. Length of the stump on dismissal, $1\frac{5}{8}$ inches.

ART. VII.—*Case of Punctured Wound, followed by a remarkable train of Symptoms.* By LUTHER TICKNOR, M.D., of Salisbury, President of the Connecticut State Medical Society (with remarks by the Editor).

MRS. A., about the middle of November, 1844, in washing some small articles of dress, pierced the end of the middle finger with the head of a

threaded needle which she supposed penetrated the ball of the finger to the depth of from one third to one half inch. The first sensation was that of numbness, instantly following the infliction, extending up the arm to the axilla and front part of the shoulder. This was followed immediately by numbness of the fingers of the other hand, and next with faintness and vertigo, which brought her pretty soon to her bed. Some mitigation of these symptoms was procured by laudanum, so that I did not see her until severe pain and febrile symptoms, oppressed respiration and gastric sinking, excited some alarm for her safety, about forty-eight hours after the injury. I found her with hurried anxious breathing, very frequent obscure pulse, a moist surface, with temperature but little increased, almost constant chilliness, and what the patient called faintness. These two latter symptoms continued with very little variation for five or six weeks. A diffused swelling not easily defined occupied the upper portion of the "pectoralis major muscle," extending upward to the articulation of the shoulder; certain points on this tumefaction were excessively painful and tender to the touch. These tender points changed their location from time to time, so as to encourage the hope that some improvement was going forward.

The local treatment consisted of dry cupping, epispastics, fomentations, anodyne poultices, anodyne linaments, &c., with very little apparent benefit; and yet anodyne poultices did the best. Internally, opium, in some form, and in large quantities, was indispensable throughout her treatment. Profuse perspiration, subsultus and incipient delirium pretty early suggested the use of tonics, of which sulph. quin. was preferred and freely used with advantage. About six weeks after the injury a slight fluctuation was felt under the edge of the tendon of the pectoral muscle, within the axilla. Forty-eight hours after it was discovered, a spontaneous discharge of at least eight ounces of rather thin purulent matter took place, and continued profuse from this orifice, and one made subsequently a little lower down upon the chest, for about two weeks, when constitutional and local symptoms gave place to returning health. Immediately after the fluctuation was discovered, Mrs. A. made free with London porter, it being the only stimulus of the diffusible kind her stomach would bear, and this it bore to good purpose. Mrs. A. is now entirely well, I believe, though perhaps the shoulder droops a little from the awkward position in which the arm was kept for a long time, rather than from any imbecility of the muscles. A deep depression marks the site of the abscess, showing a pretty extensive condensation or loss of cellular tissue.

Now, sir, is or is not this rather an uncommon history of a punctured wound? Nothing like it has occurred within my field of vision, but that is no proof of anomaly. Is there not some analogy observable in this case, with poisoned wounds? Will you be so good as to furnish some remarks on this case.

Remarks.—We thank our old and honored preceptor, Dr. Ticknor, for the above very interesting case, and hope he will favor our readers with still further contributions of a similar kind. Although we cannot hope to elucidate the pathology of this particular case by any remarks of our own, still we feel obliged to comply with his request by stating such suggestions as its perusal has given rise to in our own mind.

The case is one of uncommon interest, both physiologically and patho-

logically. We shall first notice the physiological deductions which seem to flow from this accidental wound, which, for our present purpose, we will view as one instituted for experimental purposes.

The nerve which was punctured, was undoubtedly a branch of the *median*, which is formed by the two lower cervical and the first dorsal nerves; and is the largest of the *brachial plexus*, which latter supplies two or three filaments to the *phrenic* or *internal respiratory nerve*, and sends numerous branches to the external muscles of respiration, to the pectoral and deltoid muscles, and indeed to the whole external part of the chest and neck; and to the *serratus magnus*, a large branch is sent, called by C. Bell, the *external respiratory nerve*, which is also connected by a filament with the *phrenic*.

It appears that when the wound was first inflicted, a *sensation of numbness* was felt running up the arm to the axilla and shoulder, and immediately afterwards the *same feeling was experienced in the fingers of the other hand;* as no mention is made of spasms or convulsions, it is inferred that none were manifested, except *subsultus*, which occurred at a later period of the disease.

This, so far as our reading and observation extend, is a rare phenomenon, and one well worthy of consideration. According to *Marshall Hall's* doctrine of the reflex function of nerves, which supposes that a nerve is compounded of sentient and excitor filaments, and has probably two origins, one in the cerebrum, the other in the medulla spinalis, so powerful a stimulus applied to an incident or sentient nerve, ought to have excited *contraction* instead of *pain* in other remote parts of the muscular system. How are the phenomena of this case to be reconciled with the doctrine of the reflex function, as explained by Mr. Hall?

Again *Muller* observes, that "*the sensation produced by irritation of a branch of a nerve, is confined to the parts to which that branch is distributed, and generally, at least, does not affect the branches which come off from the nerve higher up, or from the same plexus.*" In this case, however, we find a similar sensation experienced by the corresponding nerve distributed to the opposite side of the body; and not only this, but painful sensations in the region of the axillary plexus, and the parts which it supplies with nervous influence; and also distressing sensations in the epigastric region, which would seem to indicate irritation of the cœliac plexus and other portions of the ganglionic system of nerves. And yet Muller states that irritation is felt "*only in the spot where the irritant is applied, and that it never reacts upon the brachial plexus, and on the other nerves which arise from it.*" One clear case, like the above, in contradiction of a statement like this, is as valid in physiology as a thousand. Sensation, we know, is generally transmitted from the periphery to the centre, from the surface of the body to the source of all sensation, the brain. In addition to this, we here find *sensation transmitted from the brain* to the extremities, as well as to the vital organs of the thoracic and abdominal cavities. Examples of radiated sensations, in *the same limb*, or region of the body, are not uncommon, as the extension of the pain of tooth-ache over the whole face, of pain in one finger to the hand, arm, and other fingers. In the London Medical Gazette for 1834, a case is related where, after amputation of the thigh, a swelling formed in the ischiatic nerve at its extremity, where it was also firmly united to the cicatrix and bone; after a short time the skin of the entire stump, and sometimes even *distant parts*, as the integuments of the abdomen, became

affected with severe pain, without any inflammatory symptoms; but the trunk being amputated at a higher point, the pains did not return. *Muller* states that these sympathetic sensations do not occur *in health*, because of the isolation of the nervous fibres in their course to the brain; but there is no more isolation in *health* than there is in *disease*.

The following case, which we find in Mr. *Swan's* "*Treatise on Diseases and Injuries of the Nerves*," has many and close points of resemblance with the one reported by Dr. Ticknor. Mrs. E., aged 40, received a *cut* on the inside of the first phalanx of the left thumb. Immediately after the accident she felt a numbness in the arm, and a sense of fulness, as if the skin would burst; these sensations continued for a fortnight, and the wound healed very well. At the end of this time, violent pain came on, when a tremulous motion could be seen in the part which it occupied. The pain was termed startings or spasms, by the patient, and was felt in different ways, but the muscles were not affected. *These* spasms were felt all over the body, though they were by far the most frequent in the upper half of it. She frequently felt a great heat in the chest and abdomen, but most particularly in the latter, and the same startings as in other parts of the body. *The sensations were sometimes as if the flesh was pinched with hot irons:* sometimes a great heat, as if hot water was poured down her back; sometimes she had frequent shakings of the whole body, which were unattended with pain, and were most relieved by drinking hot water. The spasms were not confined to the left arm, but she had them at the same time in the right, and *frequently in the right when she had none in the left.* The fore finger was as painful as the thumb, and if anything touched either of them the spasms were produced, which continued many days. She had a good appetite, her bowels were confined and her tongue furred, but she had no thirst.

Sedatives and antispasmodics seemed to do her most good, though nothing was productive of much benefit. At the end of six months the spasms were less frequent, but were reproduced if the thumb or fore finger was moved or touched. Succeeding years brought each some mitigation of her sufferings, but even after seven had elapsed, extreme susceptibility of any impression still remained in the thumb, and the forefinger had not recovered its natural condition. Lifting a weight, or using the right arm much, always produced sensations as if needles were running into it, and attempting to use the fingers of the left hand, as in knitting, produced giddiness. She continued to be affected with spasms in every part of her body till her death, which happened nine years and six months after the occurrence of the accident, when she seemed to die worn out.

The following are examples of a similar kind. Dr Wollaston states (Sir B. Brodie on Nervous Affections), that he ate some ice-cream after dinner, which his stomach seemed to be incapable of digesting. Some time afterwards, when he had left the dinner table to go to the drawing-room, he found himself lame *from a violent pain in one ankle.* Suddenly, he became sick; the ice-cream was rejected from the stomach, and this was followed by an instantaneous relief of the pain in the foot.

"A gentleman consulted me," says Sir Benjamin Brodie, "concerning a pain in one instep. The pain was severe, causing lameness, so that he walked with difficulty: but there was neither swelling, nor, except the pain, any mark of inflammation. I prescribed some remedies, which, however, were of no avail. One morning he called on me, still

suffering from the pain in the foot, and so lame that he could not get out of his carriage and walk into the house without the assistance of his servant. Now, however, he complained of another symptom, he had a difficulty of making his water, and a purulent discharge from the urethra. He had labored under a stricture of the urethra for many years, and had occasionally used bougies. Of late, the stricture had caused more inconvenience than usual ; but he had abstained from mentioning it, thinking it would be better that he should (if possible) be relieved of pain in the foot before any treatment was adopted on account of the stricture. Under these circumstances, I introduced a bougie, which penetrated the stricture, and entered the bladder. Immediately on the bougie having been used, the pain in the foot abated ; and in less than a quarter of an hour he left the house free from pain, and walking without the slightest difficulty ! This happened some years ago, but I have seen the patient at intervals ever since ; and from a most careful observation of his case, he and I are both satisfied that the pain in the foot is connected with the disease in the urethra, and we have never found anything to relieve it except the introduction of the bougie."

The following may also, perhaps, be regarded as cases illustrating the tortuous or anomalous route sometimes pursued by sensation : as when pain is felt in the testicle, from the passage of a calculus along the ureter from the kidney into the bladder, on the same side ; or pain on the outside of the hip, from inflammation of the testicle. The former may perhaps be explained, by the circumstance that many of the nerves of the testicle derive their origin from the *renal plexus*, which also supplies the kidney, and which is formed by branches of the great sympathetic nerve. Now the calculus operates, in the first instance, on the nerves of the kidney, by which its influence is transmitted to the renal plexus, and thence *reflected* to the nerves of the testicle.

In the latter case, the nerves which supply the scrotum and cord have the same origin, viz. : the *lumbar plexus*, as the cutaneous nerves of the outside of the hip. The irritation of the former is thus communicated to the latter and referred to the parts to which they are distributed,—attacks of gout in the foot from the presence of acid or other irritating matters in the stomach, are also examples to prove that irritation in one part of the body may cause pain in another and remote part.

Instances are common enough where irritation at one extremity of a nerve is felt at the other, or at its origin : as when pain is experienced in the back, from injecting port wine, &c., into the *tunica vaginalis testis*, head-ache from irritating matters in the stomach (which is instantly relieved by an emetic).

Now, how are we to explain these facts from recognized physiological laws ? Is an impression conveyed to the sensorium by one nerve, and transmitted by it to another nerve ? Is it possible to determine, in particular cases, *why* a particular route is taken by sensation ? Is it, in short, reflex action from the brain or spinal cord, at all ? *Muller* has asked, whether a current, in such cases, passes from the cerebral or spinal extremity of the nerve in a retrograde course, to its peripheral extremity; or, if there is no current, but merely oscillation of a nervous principle ? whether the impression conveyed to the brain by the nerve primarily excited, gives rise to a reflex oscillation in another nerve, from its cerebral to its peripheral extremity ? It seems altogether improbable to us that either currents or oscillations are propagated in a retrograde

direction from the brain; nor is it necessary, in explaining the phenomena in question, to suppose the existence of any such law, or mode of action; it is more rational, and certainly more philosophical, to suppose that the irritation is transmitted to the origin of the nerve, in the brain or spinal cord, which supplies the part affected, and *there* affects the *origin* of other nerves, going to other parts, and thus giving rise to sympathetic sensations in those parts to which such nerves are distributed. As when a limb has been amputated, sensations are apparently felt in the limb that has been removed; and, in epilepsy, an *aura* is experienced in the lower extremities, although we know that the cause and true seat are not in those parts, but in the spinal marrow or brain; being, in fact, nothing more than the first symptoms of the affection of the spinal marrow and brain, which show themselves during the attack.

In affections of the spinal cord, moreover, the sensations are felt in the peripheral parts of the body, as, in inflammation of the cord, we feel violent pains in the limbs. In this manner, we apprehend, are sensations sometimes radiated to different and remote parts of the body.

In the case of Mrs. A., the function of *respiration* and *circulation* was seriously affected, and that *immediately* upon the infliction of the wound. Our first inference from this fact is, the phenomena were manifestly the result of *irritation*, and not *inflammation*, as sufficient time had not elapsed for the processes of the latter to have been instituted. Hence, the opinion of some, that all phenomena that arise in consequence of injuries to nerves are owing to inflammation, is erroneous, and should be abandoned.

The symptoms also indicate, that that portion of the spinal cord and medulla oblongata, that gives origin to, or is connected with, the par-vagum, sympathetic, phrenic, and other nerves that minister to the functions of organic life, was profoundly affected; and it is a remarkable fact, that an impression of so grave a character was chiefly confined to that portion of cerebral or medullary matter that is concerned in *sensation*, and did not involve the tract concerned in *motion*. The cold and moist surface shows a suspension of capillary circulation—a function well known to depend on the integrity of the nervous power. The sensation of "faintness" may perhaps be referred to the deranged function of the nerves which constitute the *cardiac* and *solar plexus*. The *sensation* of "rigor," or constant chilliness, is an attendant upon local irritation, under a great variety of forms—expressive of a sympathy of the circulating with the sensorial organ—of the heart with the brain. It may arise from *fear*, from *cold*, from *suppurative action*, from a *direct nervous impression*, as *syncope*, from the *prostrative character of severe irritation*, as a severe shock or blow; and in general, perhaps, it indicates returning animation and reaction. Another remarkable feature in this case, was *the formation of an extensive abscess* beneath the pectoral muscle. When we take into consideration the state of the system at the time, the low state of the circulation, and the imperfect manner in which all the vital functions were performed, we are certainly forced to the conclusion, that suppurative inflammation does not, at least, always indicate a high grade of arterial action, and that it may be sometimes combated most successfully by anodynes and tonics—remedies to allay irritation and support the integrity of the vital powers. The effect of the remedies will, also, clearly lead to the same conclusion. May we not hence derive a useful lesson? and, when we meet with local inflammation, with deteriorated condition of the general health, and symptoms of irritation present, in one or more organs,

whether it be the brain, the stomach, or the urinary apparatus, instead of general or local bleeding, resort, with advantage, to a cordial, supporting plan of treatment?

Mr. *Travers*, in his excellent work on "Constitutional Irritation," has pointed out with great clearness, the distinguishing marks between inflammation and irritation, which the reader may profitably consult in connexion with this subject. This case proves very conclusively that if much may be said as to the "constitutional origin of local diseases," much may also be advanced upon the local origin of constitutional diseases.

Dr. T. has inquired whether there is not some analogy in this case with *poisoned wounds?* So much so, we would say, that had the same symptoms occurred from a dissection wound, few would have doubted that they were occasioned by the absorption of morbid matter. Mr. Lawrence thinks it very doubtful, whether "anything that can be called virulent or poisonous, is introduced into the human frame by dissection wounds," but imputes the effects to the mechanical injury inflicted. Such cases as the above would seem to lend considerable support to such an opinion. The instantaneous occurrence, however, of some of the gravest symptoms, may serve to distinguish such a case from one where poison has been absorbed, as, in the latter instance, some time would be required for the development of the disease. It depends, we believe, entirely on the state of the general health at the time, whether such accidents ever lead to any serious result; certainly in a very large majority of cases, no unpleasant symptoms whatever follow such wounds. During our apprenticeship in our younger years, as demonstrator of anatomy, we often met with these accidents in dissecting, but never experienced the slightest injurious effects, although we used little, if any precaution. In some instances, we believe the effects produced are such as would arise in wounds considered in themselves, without any reference to the absorption of morbid matter; in other cases it is more probable that a poison is introduced into the system, to which the subsequent phenomena are to be attributed. We here close our discourse, with many thanks to our friend who has furnished us with our *text*.

ART. IX.—*A Brief Notice of the Senecio Aureus.* Communicated to the Editor, by DR. GRAHAM, of Geneva, New York.

SENECIO AUREUS.—Class Syngenesia, Superflua. Life-root, Gravel-root, by the Indians Nun-quâ. This plant is found only in swamps and the vicinity of sluggish streams, growing in black muck, and may generally be looked for in the neighborhood of the Caltha palustris, which it somewhat resembles, the leaf being smaller and less succulent. Commonly but two leaves grow from the same root, on long petioles (6 to 12 inches), one leaf on each, serrate and ovate-cordate. In May, it sends up a purplish flower stalk from 18 to 24 inches high, the leaves of which are pinnatifid and toothed. The flowers are a bright yellow,

resembling the Taraxacum, and generally three or four in a sort of umbel. The plant remains green all winter, and as the young leaves start up in the spring, the old ones decay. It has a small purplish horizontal root, lying near the surface, sending off minute radicles into the soft soil beneath. The whole plant is used, and is easily and rapidly gathered without digging, being pulled up, by clasping the horizontal portion.

Given in infusion it promotes perspiration, the secretion of urine—increases the force of the circulation, without producing any febrile tendency, and is particularly useful in those cases of anemia, attended with cold extremities, feeble circulation and inability to endure muscular exertion. In dysmenorrhea, a cupful of the warm infusion frequently gives entire relief, abating the pain and procuring a free flow of the catamenial secretion. It is highly useful in all cases, where a diaphoretic and diuretic agent is required, and more especially if the case may be attended with spasm of the urinary or uterine systems. It seems to exert an antispasmodic influence over the capillary vessels, when the circulation is languid, enabling them to relieve themselves of accumulations of venous blood, imparting energy and power to the whole circulatory apparatus.

[The above plant has acquired considerable reputation in Central and Western New York, as a domestic remedy, and as it is not mentioned in any of our works on Materia Medica, a brief notice of it we hope will not prove unacceptable to our readers.]

ART. X.—*Observations on Rheumatism.* By H. T. JUDSON, M.D., of New York.

As it has fallen to my lot to treat a considerable number of cases of rheumatism in the course of private practice, I have thought the results of my experience might not be uninteresting or useless to the profession.

It is not necessary to detail particularly the symptoms of either acute or chronic rheumatism, as they are sufficiently well known and not easily mistaken for those of any other disease. The most remarkable characteristic of acute rheumatism is the tendency of the inflammation to change its place. It shifts from joint to joint, apparently in the most capricious manner. Yet I think I have observed that it tends from the centre towards the circumference in the lower extremities, while it follows an inverse order in the superior extremities; that is to say, the hips are usually affected before the knees, and these before the ankles; but the wrists take precedence of the elbows, and the elbows of the shoulders. The pulse is one hundred, and sometimes a little more, in the minute, full, round, and hard. We find a white tongue and the usual symptoms of an inflammatory fever.

The prognosis is generally favorable so far as life is concerned, for it is a fact that no fever is so seldom fatal as rheumatic fever; but how long the disease will continue, or how frequently the patient may relapse, it is impossible to predict. It is one of the most painful and vexatious inflictions to which humanity is subjected. When several joints and the muscles

moving them are simultaneously affected, the sufferings are very severe and the pains excruciating. The sufferer cannot bear to be moved, or scarcely touched. Even in its subdued form it is still very painful, and is not easily or patiently endured. The physicians of England tell us it often terminates in fatal disease of the heart; I have not been so unfortunate as to meet with such a case. I have known the same patient suffer nine or ten attacks in the course of twenty years, and survive them all and enjoy good health. The convalescence is frequently tedious and protracted: sometimes, however, the cure is rapid and permanent.

There have been various plans of treatment proposed and followed, such as the depleting, the narcotic, the tonic, and the stimulating; of which I shall now take some notice and briefly indicate my preferences.

Blood-letting is always the first remedy suggested. When carried to an extent sufficient to subdue the disease, it leaves the patient in a state of great prostration, and dooms him to a slow convalescence. It seems to have more control over the accompanying fever than over the local pain and swelling. On the whole, I am not in favor of excessive bleeding in rheumatism, and in many cases never use the lancet at all. I choose to commence the treatment by giving a full dose of calomel, say fifteen grains, followed by infusion of senna, or a dose of magnesia and rhubarb; then I give tartar emetic in small doses, and warm drinks to promote diaphoresis, and a pill of opium, two grains, or a teaspoonful of laudanum at night. Opiates I consider indispensable from the commencement to the termination of the disease. The employment of calomel and opium in small doses I have seldom found to have any beneficial effects. Thus exhibited, calomel is tolerated, rheumatic patients not being easily salivated; but the disease is not relieved. Opium in substance, or laudanum or the salts of morphine, in full doses, are always useful. To give temporary ease and to procure sleep are very desirable, and this composure tends to the resolution of the disease. This is all I have to say concerning the depleting and the soothing plans of treatment.

Respecting the tonic plan so warmly advocated by Dr. Haygarth in the last century, and lately revived in England, and in this country, I have no favorable report to make. The quinine has always aggravated the pain, and rendered the pulse fuller and harder. The late Dr. Bushe told me he had cured a case of acute rheumatism in three days, by the exhibition of quinine in doses of five grains, combined with the same quantity of rhubarb three times a day; having a very severe and protracted case on hand at the time, I tried his plan four days, but without his success, and was obliged to relinquish all hopes of benefiting my patient in this way. I should think such a method applicable to those cases only which have their origin in marshy districts, and which are allied to intermittent fever.

Much has been said in favor of the tincture of colchicum in the treatment of gouty and rheumatic affections, and certainly I have found no single remedy so efficacious in relieving the severe pains, and in subduing the inflammatory symptoms in this disease. I think the best way is to combine the tincture of colchicum with equal parts of the tincture of aconite, and give a tea-spoonful of the mixture three times a day, and a tea-spoonful of laudanum at bed-time. This is an effective and satisfactory method of treatment.

I am of the opinion that the guaiacum is better adapted to the chronic than to the inflammatory form of rheumatism. I use the following for-

mula: ℞ pulv. g. guaiac ʒss. pulv. g. arabic, simple syrup āā. ʒij. aqua cinam. aqua font, āā. ʒiv. M. Dose one ounce thrice daily. This is the only admissible form of stimulating treatment.

The last plan of treatment I shall speak of, is the free use of nitre. A scruple of nit. potass., and half a grain of antimony tart., given in powder every four hours, often procures great relief, and generally speaking, is an admirable way of combating this vexatious disease. The last case I had, I treated by giving, in the first place, fifteen grains of calomel, followed by a solution of half an ounce of nitre in a pint of lemonade, to be taken in the course of twenty-four hours, with a large dose of laudanum in the evening, and sufficient of the tincture of colchicum to keep the bowels free and open. The patient was much relieved in a week, and had a good convalescence. This patient is now nearly sixty years old, and has been subject to attacks of acute rheumatism since her second year. She cannot tell exactly how many times she has had the disease. Previous to coming under my care she has had it continue seven weeks, so that she could not move herself in bed. It ought to be stated here that the first attacks of acute rheumatism are generally the most severe and protracted. In the chronic form the reverse is true. I can suggest no better plan than the treatment above mentioned, for as to curing rheumatism in a day or two, or in one afternoon, as a Homeopathist once told me he had done, altogether exceeds my skill, not to say belief. I have never been so fortunate as to find any charms in the practice of medicine.

I have not much to say with regard to external applications. Blisters cause the local inflammation to change its place, driving it from one joint to another, but do not free the system from it. An embrocation of spirits of turpentine and spirits of camphor is generally useful in chronic rheumatism, and in the acute form, when somewhat subdued, is not injurious. The most efficient external means I have employed, is the tincture of aconite in the quantity of a teaspoonful rubbed on the painful parts. In neuralgia and in painful affections of the skin this gives immediate ease, and I have much confidence in it. The diet in acute rheumatism should be restricted. It is well to envelope the limbs in cotton batts, and to keep the patient as still and quiet as possible.

PART SECOND.

Critical Analysis.

ART. XI.—*Rural Economy in its relations with Chemistry, Physics and Meteorology, or Chemistry applied to Agriculture.* By J. B. BOUSSINGAULT, Member of the Institute of France. Translated with an Introduction and Notes, by George Low, Agriculturist. N. York: D. Appleton & Co. 1845. 12mo., pp. 507.

RURAL ECONOMY has peculiar claims on the attention of medical men, especially those who live in the country, as its study will be found not less interesting than profitable. The late Dr. Rush, in one of his valedictory lectures to his class, recommends those who intend to practise medicine in the country, to settle upon farms and devote a portion of their time to the cultivation of the soil as conducive to health, by furnishing employment during the healthy seasons of the year: affording an opportunity of making improvements in agriculture, by experimenting upon the nature of soils, manures, &c.; creating such an independence as will enable the physician to live without practice, or at least, to practise with more dignity; to collect in stock and labor of all kinds, debts which could not conveniently be paid in money; and lastly, preventing the practitioner from "cherishing an impious wish for the prevalence of sickness in his neighborhood;" a healthy season enabling him to add to the produce of his farm, while the rewards of an unhealthy season enable him to repair the inconvenience of a necessary absence from it.

In the present multiplication of medical men, Dr. Rush, were he now living, would find an additional reason for directing their attention to agricultural pursuits. To them, the cultivation of agricultural science is a duty, for it is a branch of physiology, and physiology belongs to medicine: it is a department of organic chemistry; and this constitutes one of the important pillars of medical science. Physicians have always been foremost in extending the bounds of useful science, and to them, more than to all other classes, does society look for its future advancement. To them it is principally owing, that agriculture has advanced from an *art* to a *science;* to them are mankind chiefly indebted for the blessings and benefits which have resulted from its scientific cultivation. Regarding agriculture as constituting the true foundation of all trade and industry, and hence the source of all national wealth; that it is based on scientific principles (whether we are acquainted with them or not), on a knowledge of vegetable chemistry, which teaches the manner of investigating the composition and studying the characters of the different substances from which plants derive their nourishment, it belongs, indeed, to the members of our profession to cultivate this science, as a province of

their own natural domain,—as a field in which noble trophies are to be won—a department fertile in interest, and inexhaustible in riches.

In the person of the author of the present work, we find a model worthy of imitation, for in him we see the man of science happily associated with the practical farmer,—the accomplished naturalist, the profound chemist, and natural philosopher. The friend and fellow-laborer of Arago, Biot, Dumas, and all the leading minds of his age and country, M. Boussingault's title to consideration is recognized wherever letters and civilisation have extended their influence.

In the first part of the present work, the author treats in succession of the physical and chemical phenomena of vegetation; of the composition of vegetables and their immediate principles; of fermentation and soils. The second part comprises a summary of all that has yet been done on the subject of manures organic and mineral; a discussion of the subject of rotations; general views of the maintenance and economy of live-stock; and finally, some considerations on meteorology and climate, and on the relations between organized beings and the atmosphere. If any one portion of the work is of more value than another, it is perhaps the chemical part, which is written with consummate skill and knowledge; and with a minuteness and accuracy deserving of all praise, and what is of importance to many readers, the results of the writer's researches, as well as the means and processes by which these results were obtained, are displayed with such perspicuity as to be intelligible and instructive to every agricultural inquirer, however superficial his previous acquaintance may be with the details of chemical science. The author's elucidation of vegetable physiology is at once masterly and complete, and contains much that is both valuable and new. In short, we regard the work as the best text-book and manual on the subject of chemistry applied to agriculture, or "Rural Economy," in all its departments that has ever been presented to the public.

ART. XII.—*A Practical Treatise on Laryngeal Phthisis, Chronic Laryngitis and Diseases of the Voice.* By A. TROUSSEAU, and H. BELLOC, M.D. Philadelphia. Carey and Hart, 8vo., pp. 186.

AMONG the proceedings of the New York Medical and Surgical Society, will be found some interesting papers, by Drs. I. E. Taylor and Horace Green, on the subject of local applications in diseases of the larynx. We have thought that in order to present the whole subject fairly before the reader, it would be advisable to notice the original work of MM. Trousseau and Belloc, to whom the profession is indebted for the introduction of this novel mode of treatment, in laryngeal affections. The practice of cauterizing the larynx has now been pursued in this city, since 1839, and was, we believe, introduced by Dr. Horace Green, who states that when he first resorted to it, he was not aware that it had been previously practised in Paris, nor was he acquainted with the present work, which was published in 1837, and re-published in English, in this country, in 1841.

The prize of the French Academy of Medicine, it appears, was

awarded to MM. T. and B., for their discovery of the fact that the lining membrane of the larynx is not only accessible to topical applications, but that its diseases may be thus successfully treated, in the same manner as conjunctivitis, diseases of the pharynx, or of the skin itself, but that such treatment is, in many cases, better than any hitherto employed.

They first give a definition and history of LARYNGEAL PHTHISIS, going back to the times of Hippocrates, and coming down to the works of Louis and Andral. They then describe with much particularity the organic alterations, first of the mucous membrane, and second of the cartilages of the larynx, and illustrate their remarks by several very interesting cases. They next discuss the question, whether *laryngeal* ought to be separated from *tracheal phthisis;* but as both forms of the disease arise from the same circumstances, and from the same predisposing and exciting causes, and moreover, when symptomatic, both originate from the same diseases, and are often co-existent in the same patient and occur simultaneously in the same organs, although they do not consider it useless to distinguish the seat or place of the lesion, they do not think it of sufficient importance to make two distinct affections, especially as the anatomical lesion is the same, and the treatment almost precisely similar.

Among the *causes* of laryngeal phthisis, are enumerated acute laryngeal angina tracheotomy, practised for croup; frequent and strong cries; habitual exercise of the voice; immoderate luxury; masturbation; periodical exanthemata; cancer; tumors in the larynx; syphilis; phthisis pulmonalis, &c. Those constitutions which are most prone to develope chronic diseases, and particularly the scrofulous and tuberculous constitutions, powerfully predispose to the disease. Next follow several cases, illustrating these particular causes. Among the exciting causes, may be reckoned acute affections of the larynx; forced exercise of the voice; frequently renewed colds; repression of *dartrous* affections; blows; falls; wounds; chills; foreign bodies, &c.

Our authors next point out the different species of laryngeal phthisis, of which they make four kinds, viz. 1. *Simple laryngeal phthisis.* 2. *Syphilitic;* 3. *Cancerous;* 4. *Tubercular laryngeal phthisis;* of each of which, several interesting examples are given.

An account of the *symptoms* is next in order, which are first described in a general manner, and then the forms and peculiarities of each species of laryngeal phthisis are pointed out, as well as the relations that exist between especial lesions of the larynx, and particular series of symptoms; as these are highly important, we shall quote them at length.

"*General symptoms of laryngeal phthisis.*—During the first period of the disease, local symptoms alone claim the physician's attention. The general symptoms are rarely developed, except when acute diseases of the larynx give rise to laryngeal phthisis, or when that assumes a threatening aspect. It is, therefore, the local symptoms that should first attract our whole attention.

"A. *Alteration in the quality (timbre) of the voice.*—This is one of the first symptoms that attract attention. At first, it is often a simple want of power; oftener a decided hoarseness. Sometimes continual, at others, recurring only when the larynx has been fatigued, or when the patients have been exposed to a change of temperature.

"It is an important fact, that the transition to a colder atmosphere is less prejudicial than the change from cold to warm. This singular result has been repeatedly observed in our patients, and we confess we have been much surprised at it. The voice, also, becomes hoarser, in proportion to the time

the patient has been up, so that, on the morning visit, when the patient has just awoke, we have observed the voice much clearer than in the evening. This is probably owing to the larynx having gained some repose during sleep, and becoming fatigued during the day.

"Another observation, which seems to have escaped writers, is, that if there be a good appetite for food, the hoarseness is generally very decided, and that it disappears more or less completely after the meal, but soon returns to the same point as before.

"It is not a useless exercise to examine into these minor details, because we may be often deceived in our diagnosis of the state of the larynx, if we are ignorant of these singular changes, and of the causes which produce them.

"The menstrual period, also, affects the hoarseness, which is generally greatest at the approach, or passing off of this discharge. Venereal indulgence, also, increases it considerably.

"The hoarseness is intermittent in the first stage, but soon becomes continual, and may remain so until the close of the disease, though extinction of the voice often supervenes in the second stage.

"It is difficult to describe the approach and symptoms of the hoarseness; though a practical ear recognizes some sounds which correspond to peculiar forms of alterations in the larynx. Thus, there are some kinds which convey to the ear a mucous and broken sound, but which show that the column of air has not a free passage; this is what we have called the *mucous* hoarseness: it is heard in simple catarrhs, and when constant, commonly only indicates catarrhal inflammation.

"In other cases, the voice is hoarse, uneven, and rough; this we call *stridulous:* it is a bad symptom, as it almost always corresponds to an ulceration, or to vegetations in the larynx.

The aphonia, by which we mean the complete loss of the faculty of speech, comes on in the second stage of the disease, and is a serious symptom, but subordinate to many conditions which modify it.

"The aphonia, which comes on suddenly, with an acute disease of the larynx, and continues when the disease has passed into the chronic form, is not nearly so alarming as that which advances progressively.

"That which succeeds the *mucous* hoarseness is not so bad as that which follows the *stridulous*, for obvious reasons.

"In some patients, the aphonia presents curious varieties. The voice may be completely extinguished in the evening, and merely hoarse in the morning, at the moment when the patient gets up, and immediately after eating. This form may indicate a superficial organic lesion, or simply a catarrhal affection.

"The inequality of the voice is a more common phenomenon in laryngeal phthisis than has been commonly supposed, or than the patients themselves believe. When the larynx is diseased, the volume of sound is instinctively diminished, and the emission of air is generally proportioned to the intensity of phonation. But, patients who, in spite of the alteration, wish to give the original force to their voice, find that the want of calibre and strength of the vocal instrument gives rise to unexpected and discordant sounds. We have often noticed this in singers and advocates. Colonel B., who enjoyed a high reputation in the army, furnishes a remarkable instance.

"He had a chronic affection of the larynx of two years' standing. In ordinary conversation, his voice offered the *stridulous* hoarseness in a slight degree, but it was perfectly even, and, except its force, it was easily modified for animated discourse. But, when he commanded his regiment, there were such uneven and singular bursts, that nothing short of the greatest respect prevented the officers and soldiers from laughing. The finals, for which the vocal tube had to be largely opened, could not be pronounced without change; thus, the word *lance* was never uttered without the sound being converted into a broken cry.

"This has some similarity to what is often observed in youth at the age of puberty; differing in this, that the latter are not hoarse, but have two different *timbres*, and a discordance of the voice.

"B. *Cough.*—Does not differ from that observed in most diseases of the thorax: it is generally frequent, and by spells. The sound always corresponds

to that of the voice. When there is aphonia, or the *stridulous hoarseness*, it has a peculiar sound, which it is important to have well described.

"We have called it *eructant*, because, when the patient coughs, he seems to make a suppressed eructation. This character is always diagnostic of a serious alteration of the larynx.

"In a common cough, we may observe that the air is expelled by the action of the diaphragm and expiratory muscles, while it is retained, on the contrary, by the contraction of the glottis; the expulsory effort finally overcomes the resistance, and drives the air through the larynx with a sound which we call 'cough.'

"Now, when the sound, instead of being clear and short, is prolonged and *gulping*, it is because the glottis is unable to move freely, or because deep ulcerations prevent it from closing; which explains why the eructant cough is so bad a symptom.

"The difference in frequency is altogether inexplicable. Some are tormented by an incessant cough, so obstinate that they cannot enjoy a moment's rest, and their food is rejected by the contraction of the expiratory muscles; others, whose autopsy presents the same lesions, have scarcely coughed, and succumbed only under the increasing swelling of the mucous membrane of the larynx, and the consequent asphyxia. The cough is generally calmed by food and drinks during the first stage; but, in the second, aliments pass partially into the larynx, and cause convulsive fits of cough, which nothing will relieve. The frequency of the cough is not nearly so unfavorable a symptom as its hoarseness, and the change in the volume of the voice. Some persons have an obstinate cough for years, while their lungs remain free, and there is no alteration in the larynx: one of our patients, Baron Trémont, is in this situation. He coughs in the most fatiguing manner; the most energetic medicines afford him no relief; but his voice remains clear, and nothing indicates tubercles of the lungs, or ulceration of the larynx.

"C. *Signs furnished by the expectoration.*—The expectoration in simple laryngeal phthisis furnishes negative rather than positive signs. It is commonly purely mucous, transparent, and not very tenacious; sometimes very abundant, and a simple mucous secretion (*phlegmorrhagie*); sometimes less copious, when the matter is more thickened.

"When there is an ulceration, the expectoration, without losing the characters already described, offers some peculiarities. Little puriform masses, often mixed with streaks of blood, and even quite bloody, are expectorated, without effort, rather by an attempt to clear the throat than by a cough. We shall hereafter see the diagnostic value of the abundance of puriform expectoration.

"D. *Pain.*—In more than half the cases of laryngeal phthisis there is no pain from the beginning to the end of the attack. It is even remarkable, that they who complained a little at the commencement of the disease, when the phlegmasia was acute, did not suffer at all when the mucous membrane and the cartilages of the larynx were nearly destroyed by ulceration or necrosis.

"In a few, there is some pain in the larynx, especially at the origin of the trachea; it is rather a sensation of smarting, which we have never found very distressing to the patients. On the contrary, almost all suffer acutely when they swallow, and patients tell us they feel no pain in speaking or breathing, but when they swallow, and therefore their disease must be in the pharynx only. An examination of the pharynx shows nothing which could explain the symptoms; and if we have an opportunity of making autopsic examinations of the organs of voice, we find considerable organic alterations. How, then, shall we explain this want of correspondence between the anatomical lesions and the symptoms? We think it may be easily done. What parts of the larynx are ordinarily most affected? By turning to the chapter on pathological anatomy, it will be seen that, in ulceration, caries, or necrosis, the mucous membrane, which covers the epiglottis, the aryteno-epiglottidean ligaments, and the arytenoid cartilages, is almost always the seat of inflammatory engorgement. Now, this forms the anterior part of the pharynx, and no effort of deglutition can be made without the mass of food being pressed against these inflamed, and often ulcerated tissues.

"When, on the contrary, the front part of the larynx is touched through the skin, the inflamed mucous membrane is protected by the hyoid bone and thyroid cartilage, and, consequently, does not receive impressions of pain, unless we indent the cartilages, or move them considerably: add to this the fact, that the membrane at the upper opening of the larynx is endued with extreme sensibility, while that lining the organ has very little:—we have satisfied ourselves of this by experiments made when we have been obliged to perform tracheotomy.

"E. *Signs obtained by inspection.*—By opening the patient's mouth widely, and depressing the tongue with the handle of a crooked spoon, so as to bring the base of the organ well forward, the veil of the palate, the uvula, the tonsils, and the bottom of the pharynx are brought into view. It is important to ascertain the condition of these parts, especially when we have syphilitic laryngeal phthisis. The state of the uvula, also, deserves especial attention, because the procidence of this organ may sometimes cause serious inflammatory symptoms in the larynx.

"But the exploration of the epiglottis is of extreme importance, as we have before remarked: although this organ belongs to the tongue, its pathological relations require it to be considered as an appendix to the larynx. Pathological anatomy shows us, indeed, that the larynx is rarely much diseased, without the epiglottis participating in the affection.

"But there are few patients in whom we can see the epiglottis: we have met but two, in whom the throat and the tongue were so formed that we could see the whole of its upper surface. By making the patient utter a cry during the examination, the epiglottis may be seen starting forward at every expiration. In these two patients, whose disease was not far advanced, the mucous membrane was of a cherry red, and decidedly thickened. It may be inferred that the aryteno-epiglottic ligaments and the lining of the larynx were in the same condition.

"It would, doubtless, be very important to be enabled to examine the larynx by means analogous to those furnished by the speculum. Some years ago we endeavored to construct a *speculum laryngis*. M. Selligue, a very ingenious mechanic, himself a sufferer from laryngeal phthisis, of which he has been completely cured, constructed for his attending physician, a speculum formed of two tubes, one of which conveyed light to the part, while the other returned the image of the glottis, reflected in a mirror at the guttural extremity of the instrument. M. Sanson, cutler, made us a speculum on the principle of that just described. This instrument is of difficult application, and there is not one patient in ten who can bear its introduction. Indeed, its volume fills the space comprised between the free border of the veil of the palate and the upper surface of the tongue. When placed in the mouth, it provokes such uncontrollable starts (*sauts de corps*), that it is necessary to remove it immediately: if it touch the bottom of the gullet, which is almost sure to happen, the pharynx contracts convulsively, and with such energy as to force the instrument into the mouth.

"In the most favorable case, when the instrument can be retained in the isthmus of the gullet, the inevitable construction of the pharynx still prevents our seeing the deeply-seated parts.

"There is another difficulty, which is enough in itself to prevent our using this instrument. The epiglottis covers the upper part of the larynx so completely as to prevent the possibility of obtaining a reflection of the parts in a mirror; and further, the light introduced by the instrument must fall upon the upper or lingual face of the epiglottis, and, consequently, casts its shadow precisely on the larynx, and thus hides it from our view. Bennati was, therefore, mistaken, when he pretended to have seen the glottis with the speculum of Selligue; he generally saw only the lingual surface of the epiglottis, and very rarely the superior opening of the larynx, and that only when the accidental elevation of the epiglottis permitted.

"The glottis is so deeply and peculiarly situated that it is impossible to explore it with the speculum even in the dead subject, much less upon the living, especially when we consider the convulsive effort that attends its introduction, even in those who have been most habituated to it.

"We have never observed swelling of the anterior region of the neck in simple laryngeal phthisis; this is owing to the mucous membrane being separated from the subcutaneous cellular tissue by the whole thickness of the cartilages. It is remarkable that even when there is considerable necrosis or caries of the cartilages, there is seldom any external tumefaction which would lead us to suspect such serious disorders.

"We have only once seen a tumor point between the cricoid and thyroid cartilages; this was almost insensible at first, but coincided with decided laryngeal phthisis. It was necessary to perform tracheotomy to prevent asphyxia, and we afterwards saw the tumor developed as an enormous cancer. Obs. XVIII.

"F. *Signs obtained by touch.*—In pressing the larynx a crepitation may sometimes be perceived, which has been mentioned by some authors, especially by M. Laignelet, as a sign of laryngeal phthisis.

"This sign at first deceived us, thinking it was produced by the rubbing of the necrosed portions against one another. But experience has taught us that it is most frequently found when the larynx is perfectly healthy; hence it loses its value as a diagnostic. Still it should not be neglected, but we must pay great attention to distinguish whether the crepitation be produced by the friction of the cartilages against the vertebral column, or whether it result from the grating of portions of cartilage that have been separated from each other by caries or necrosis. In the latter case the noise would probably be drier, and might be produced by squeezing the larynx; while in the former, it is never hard, except when the whole organ is moved. We confess we have never distinctly heard the crepitation resulting from the pathological state of the larynx.

"As for touching by the mouth, which is advised in almost all works on œdematous laryngeal angina, we may observe, that the exploration of the glottis is physically impossible, as the finger cannot be introduced into the larynx. The examination must be confined to the epiglottis and upper part of the larynx.

"But this exploration is attended with more difficulty than is supposed by those who theoretically recommend it without having practised it on many subjects. It is far from being so simple as touching the neck of the uterus; as soon as the finger has reached the base of the tongue and has merely touched the epiglottis, there is so energetic and general a spasm induced, that the finger can remain in contact but a second or two, so that we cannot thus obtain much information, and can only detect great ulcerations, such as vegetations or tumors. We cannot by this means ascertain the existence of ulceration in the aryteno-epiglottic ligaments;—at least, we have never been able to do it, although accustomed to this mode of examination.

"We read with astonishment what some authors tell us in their writings upon œdematous laryngeal angina; when they say it is very easy to recognize this serious disease by the touch. We esteem it a very difficult, if not impossible diagnostic means, for the reasons already stated.

"Touch is, therefore, rarely applicable in our diagnosis of diseases of the larynx.

"G. *Signs furnished by respiration.*—These are among the most important next to the signs furnished by the voice. In the first period of laryngeal phthisis, the respiration is not generally disturbed, except under peculiar circumstances, and when the patient takes violent exercise, in which case the inspiratory sound is a little braying; nothing of the kind is observed in expiration. If by chance in the course or at the commencement of the first period there should suddenly occur an increase of laryngeal inflammation, then symptoms of acute croup will be manifested; but this is an exceptional case, and in proportion to the progress of the disease will be the increase of oppression, which may be owing to two causes.

"If the disease of the larynx have induced consumption by the means we shall, explain, or if there exist simultaneously pulmonary tubercles,—a powerful cause of laryngeal phthisis, the patient will have shortness of breath and panting on the least exercise, and sometimes even when in a state of repose. In this case the

oppression does not differ from that observed in the cases of debility and other forms of phthisis. But there is another important form of dyspnœa,—that which accompanies narrowing of the larynx. This has peculiar characters, and we shall endeavor to describe its form and course.

"When the disease has been of long standing, and the obstruction begins to attain considerable age, the patients who had suffered mere panting (*anhélation*) accompanying their debility, begin to experience what they call fits of asthma; at first, these occur in the latter part of the night, sometimes they are awakened four or five nights successively by paroxysms which increase in force. During the day they are better, but have an unusual difficulty of respiration, especially when they take violent exercise, or ascend a stair.

"After a while they cannot lie in bed, but remain seated and propped up with pillows. They have similar attacks during the day, and from this time the inspiration is hissing and respiration is prolonged and braying.

"In a few days, such violent paroxysms come on, that the sense of impending suffocation causes the patient the deepest anxiety; the fits pass off, leaving continued orthopnœa. More violent and more frequent paroxysms follow, until the patient finally perishes from suffocation.

"These fits are truly frightful; with livid face, open mouth, expanded nostrils, suffused and projecting eyes, and streaming with perspiration, the patient rapidly paces his chamber, and occasionally lays hold of objects that he may breathe more easily; sometimes the head is inclined upon the breast, but more frequently reversed; when, at last, overcome with fatigue, he sits down for an instant, soon gets up again. He tears all covering from his head, neck, and chest, and exposes himself eagerly to the cold air at the window, which he throws up with a sort of transport.

"Inspiration is hissing, short, and executed by the whole of the inspiratory muscles; but expiration, although less braying, is long, and as laborious as inspiration. Expiration is generally passive, but in these cases it is quite as active as inspiration.

"At last the patient falls into a profound depression; respiration is more frequent, shorter, and apparently easier; the breath is not warm; the whole body grows cold; the face changes from livid to pale, and is glossy; the eyes grow dim, and death occurs in a sort of calm.

"The time from the first fit of orthopnœa until death, is generally fifteen to twenty days; the fits begin to recur more than once a day about five days before death. To this, however, there are numerous exceptions. Sometimes a paroxysm occurs in the course of the disease, which proves almost immediately fatal. We will state two cases of this character; the first was noted by M. Marjolin and ourselves; the second by Morgagni."

Important signs are also furnished *by the mode of deglutition.* Besides *pain* in the act of deglutition already noticed, there is also an impossibility of swallowing liquids or food that is minutely divided, and cannot be formed into an alimentary bolus. Most authors attribute this phenomenon to the destruction of the epiglottis. MM. T. and B. maintain that the destruction of the epiglottis does not prevent some patients swallowing perfectly, while others, whose epiglottis is not affected, cannot execute any movement of deglutition without letting the food enter the larynx; of both of which examples are given.

We next have a description of the differences of symptoms according to the species of laryngeal phthisis. We have seen that the tone of the voice, the cough, the local swelling, the mode of respiration and deglutition, are precisely the same, whatever may be the species, because they depend upon an organic modification, common to all, namely, inflammation, ulceration, and narrowing of the larynx, but each species offers some peculiar symptoms. In *syphilitic* laryngeal phthisis, there is often very *acute pain*, especially in the act of deglutition, while in

simple laryngeal phthisis there is generally very little. This is explained by the fact that in the former the pharynx and tonsils are generally covered with ulcers, or are deeply furrowed with cicatrices, the velum of the palate is also sometimes ulcerated. There is always considerable erythema of the mucous membrane in the syphilitic form of the disease, and more or less swelling of the submucous cellular tissue, and sometimes œdema of the uvula and palate. The previous history of the case and the *collateral* symptoms will generally enable us to form a correct diagnosis. It is worthy of note, however, that in simple laryngeal phthisis, the disease generally commences in the larynx or trachea, whilst in the syphilitic form it begins in the pharynx, or nasal tissue. In *tubercular laryngeal phthisis*, we have, of course, the signs of pulmonary consumption added to those of simple laryngeal, after tubercles are once developed, the laryngeal affection proceeds rapidly. "Indeed," say our authors, "in tuberculous patients we find the simplest phlegmasiæ have a fatal tendency to be aggravated and to take an unmanageable character. Thus the slightest sprain occasionally becomes the cause of a white swelling, and the mildest affection of the larynx may occasionally cause laryngeal phthisis. Hence when making our prognosis of the diseases of this organ, we should pay the closest attention to the slightest signs of pulmonary tuberculization, and not anticipate a cure when we can only palliate the disease temporarily." (p. 92.)

The symptoms of *cancerous laryngeal phthisis* do not differ essentially from those of simple laryngitis, there being an entire absence of those lancinating pains, so common when other structures are the seat of carcinomatous diseases. There are in fact but three diseases with which there is danger of confounding laryngeal phthisis, namely, *tracheal phthisis, œdematous laryngeal angina, and asthma.* The first two are regarded, as already stated, as not easily separable or distinguishable; *and œdematous laryngeal angina* is in nearly the same predicament. When acute it can only be confounded with *croup;* when chonic, which is most frequently the case, it is oftener one of the terminations of laryngeal phthisis, and therefore, merely a symptom of this affection. There is no danger of confounding laryngeal phthisis with that habitual difficulty of respiration which attends diseases of the heart and lungs, and which erroneously goes under the name of *asthma*, but it may possibly be mistaken for that singular nervous affection of the respiratory apparatus, characterized by paroxysms of orthopnœa, and followed by more or less calm in the respiration. There is, however, one important mark by which they are always to be distinguished; in *asthma, the voice is sonorous; in laryngeal phthisis, it is extinct;* however, the oppression of asthma comes on suddenly without warning, or appreciable cause; after a few hours, it ceases and leaves the patient with no other symptom than a little fatigue. While, on the contrary, in most cases of laryngeal phthisis, the orthopnœa comes on gradually, and has generally been introduced by a palpable difficulty of respiration, and by an alteration in the volume of the voice. When the paroxysm has ceased, the respiration is far from being clear, and the fits go on increasing in their intensity, until at last the patient reaches such a degree of asphyxia, that death is threatened or is duly averted by a surgical operation.

Our authors next take up the *terminations* of simple laryngeal phthisis and show that it is the hectic form, night sweats, abundance of expectoration, violence of the cough, want of sleep, and derangement of digestion

that destroy the patient in this disease, dissection having pointed out nothing to explain these secondary symptoms but the alterations of the larynx. Contrary to what has been laid down by most writers on this subject, they state that they "have never seen a single case of chronic disease of the larynx which caused death by consumption," although they remark that "pulmonary phthisis is a very frequent termination of laryngical phthisis." We believe that death from simple laryngitis, without its extension to other organs, is comparatively rare, and yet we know that patients are sometimes worn out, by the harassing cough, difficulty of deglutition or even impossibility of swallowing food, without occasioning convulsive cough and suffocation, want of sleep, night sweats, &c. Under ordinary circumstances, the affection of the larynx, when not far advanced, and when unaccompanied by an obstinate cough, or fever, or oppression, scarcely ever causes emaciation, but when these symptoms occur, dyspnœa and emaciation progress rapidly, and the patient dies asphyxiated. Laryngeal is not only a frequent *cause* of pulmonary phthisis, but also the *effect* of the latter; it is even possible, as M. Louis has suggested, that ulceration of the trachea and larynx may be caused by the passage of pus, causing irritation of the lining membrane of the air passages. The conclusions to which our authors arrive are the following:

1st. That in most cases, tubercular pulmonary phthisis is first established, and that the larynx is afterwards affected.

2d. In some rare cases the tubercular lesion commences in the larynx, and only invades the lungs secondarily.

3d. That sometimes both exist and progress simultaneously.

4th. That in this case the lesion sometimes seems to exist exclusively in the larynx, because of the predominance of the laryngeal symptoms, and the difficulty of ascertaining the pulmonary lesion by stethoscopic signs.

Laryngeal phthisis may terminate in *cure*, provided it be treated properly at an early period, and before any considerable organic lesions have altered the tissues of the larynx and trachea; but if the disease be far advanced, and has debilitated the system by habitual dyspnœa, cough, and prolonged abstinence, and especially when signs of marasmus have begun to be developed, there is little hope left of saving the patient, although cases do occasionally occur, where recovery takes place, after the disease has been of long standing, and attended with extensive local ulcerations.

Treatment.—It is of the first importance in treating this, as all other acute affections, to attack the disease at as early a period as possible; and the measures are those which would be proper in a case of acute catarrh. *Rest* is absolutely indispensable; the organs of voice must not be exercised by speaking; or if the patient is allowed to speak, it must be in an under tone (*voix basse*). General blood-letting and emollients stand first on the list of active remedies, in subduing the affection, aided, however, by local bleeding and other adjuvants. Warm poultices and other similar applications to the throat are condemned on account of their provoking a considerable flow of blood towards the throat, and thus causing an aggravation of the symptoms. *Revulsions* are regarded as of equal if not more importance in treating laryngeal phthisis than bloodletting, as their effects are more permanent. Of these a seton to the *nucha* is perhaps generally preferable. Sometimes it may be placed with advantage, op-

posite the crico-thyroid space. The writers also recommend antimonial frictions and caustic potash; the latter to be applied once a week, on either side of the larynx and trachea, thus causing a purulent discharge. Revulsions are found to act most beneficially when applied *near* the diseased organ. *Opiates* are very important, as they serve to calm the pain and relieve the cough, both of which tend to aggravate the inflammation. External applications of a *narcotic* kind, as those of the extracts of belladonna, stramonium, and the salts of morphine, are very useful, and they should always be applied to a vesicated surface. The leaves of belladonna or the stramonium may also be smoked with benefit, especially after having been boiled in a solution of opium, and dried. We should suppose that opium smoking after the manner of the Chinese, would be the best method of applying an opiate to the part affected. We have found it in many cases the best mode of administering this article, especially where we wish to avoid the constipating effects of the drug, and to preserve the powers of the stomach in full digestive vigor. Sleep may thus be induced and pain relieved, without producing any unpleasant effects.

We now come to *topical applications*, which constitute the most important part of the work. We shall quote the remarks on this subject at length.

"*Topical Medication.*—When a simple or ulcerative inflammation has become chronic, and occupies but a small point in the economy, it generally resists even the most thorough general treatment. On the contrary, topical medication or the direct application of medicines to the injured part, almost always modifies it. Thus the most obstinate ulcers of the throat, nose, eyes, skin, vagina, rectum, &c., &c., are generally controlled by topical applications made to their surface. These are either emollient, detergent, or irritating, and sometimes destroy the surface of the lesion. They are either pulverulent, liquid, gaseous, vapory, or solid.

"The only difficulty consists in the anatomical relations of the parts, the action of the remedies being the same internally as externally.

"If then we can find a method of treating the larynx by topical remedies, as we do the canal of the urethra, we shall open a new therapeutic avenue to laryngeal affections, and render them curable.

"We do not deny that the functional importance of the organ opposes new difficulties, but we have been able to accommodate our applications to respiration, and have used some new remedies and obtained results to which we wish to call the reader's attention.

"This is the problem to be solved; *To ascertain a method of bringing medications in form of vapor, powder, or liquid, in contact with the mucous membrane of the larynx without interrupting respiration.* We think we have succeeded in effecting this object.

"*Inspirations of dry or moist vapor.*—Various fumigations have been prescribed for laryngeal phthisis and other affections of the respiratory organs. The most common were vapor of water, either pure, or impregnated with emollient, balsamic, or aromatic substances; sometimes dry vapors were used, as those of pitch, resin, henbane, tobacco, and poppy. Messrs. Cottereau, Gannal, Richard, and others, have invented various forms of apparatus for this purpose, but we frankly confess that a simple teapot is as well adapted to the purpose as the most complicated machines.

"The moist fumigations may be charged with volatile matters, as chlorine, iodine, hydro-sulphuric acid or the various essential oils, which are not indeed without their specific action on the mucous membrane of the air passages, as has been proved by the experiments of M. Gannal, Cottereau, &c.

"We have even made our patients inspire fumigations of cinnabar, sulphurous acid, &c., &c., with various results. All these applications have the serious inconvenience of not being confined to the larynx, but coming in contact with the pulmonary mucous membrane, which they irritate exceedingly, and it is

impossible to confine their action to the diseased organ; this is the reason we have renounced their use. We now employ nothing but emollient, aromatic, balsamic, and opiate vapors, such as can exert no unfavorable influence upon the lungs.

" *Liquid medications.*—Liquids are much more easily applied, and without risk of injuring the trachea and bronchia. We have used those that are irritating, and others simply astringent. The former are solutions of nitrate of silver, of corrosive sublimate, sulphate of copper, and nitrate of mercury; but the first we decidedly prefer on account of its rapid action, its harmlessness, and its efficacy in almost all external maladies.

" We use it of various strength; sometimes we put a dram of the nitrate to two drams of water, sometimes half this strength.

" Various methods have been devised to apply the caustic to the larynx: when we wish to operate upon the upper part of the larynx and the epiglottis, we take a piece of paper firmly rolled together, and bent at its extremity, which is to be soaked in the solution, so as to take up at least a drop; the mouth is to be opened, and the tongue depressed with the handle of a crooked spoon. The porte caustic is then introduced, and when its extremity has passed the epiglottis, it is to be depressed, which buries it in the upper part of the larynx. A piece of whalebone answers the same indication, and is more convenient, because less flexible than the rolled paper.

" When we wish to cauterize the pharynx, the base of the tongue, and the top of the larynx at the same time, we take a whalebone, at least a line and a half thick, that it may not bend readily;—this is heated an inch or more from one end, and, when sufficiently softened, we curve it at an angle of forty-five degrees. To this end, we fasten a spherical piece of sponge, six lines in diameter: the sponge is to be moistened with a solution of nitrate of silver, and the mouth opened, and the tongue depressed as before. When the isthmus of the gullet is passed, there occurs an effort of deglutition which elevates the larynx, and we seize this opportunity to draw forward the sponge, which had been at the entrance of the œsophagus. By this manœuvre we get at the glottis, and then it is easy to express the solution into the larynx: the cough, which now occurs, favors the introduction of the caustic. The operation often excites vomiting.

" This plan, though not painful, is very disagreeable, and many patients refuse to submit a second time. We then use the following, which is equally efficacious, and less unpleasant.

" It consists of a small silver syringe, like Anel's, with a tube five inches long, and curved at the end. The opening of the tube should be at least a quarter of a line in diameter. The syringe is filled to one-fourth of its capacity, and then the piston is raised to its full extent, so that there shall be one quarter solution, and three quarters of air in the instrument. This is indispensable, that when we depress the piston rapidly, we may produce a fine shower, and not a full jet.

" The patient is placed as before; and when the end of the tube has passed the epiglottis, the liquid is pushed out of the instrument, and is simultaneously introduced into the larynx and upper part of the œsophagus. The patient instantly experiences a convulsive cough and regurgitations, which enable him to throw off the solution which is uncombined with the tissues. We then make him drink a few mouthfuls of hydrochloric lemonade, or simple salt water, to decompose any of the solution that may have remained in the œsophagus.

" One must have practised, or seen these cauteries performed, to have an idea of their harmlessness, and of the little pain which results. We are very much afraid of cautery, for it is exceedingly painful on the skin or mucous openings, though scarcely felt in the pharynx, larynx, or neck of the uterus. We must not confound the organic sensibility of the larynx that sympathetically causes the cough, with the animal sensibility of this organ, which is extremely obtuse.

" We shall furnish some cases that show the utility of cauterizing the larynx in the first stage of laryngeal phthisis."

Next follow a considerable number of cases, illustrating the efficacy of this mode of treatment. As doubts may exist in the minds of some of

our readers as to the practicability and safety of cauterizing the larynx, we may remark that we have not practised it ourselves, but have seen it done repeatedly by others. We have stated that to Dr. Horace Green belongs the credit of introducing this topical mode of treating laryngitis, into this country; and we are happy to know that the same success has attended the treatment, in his hands, as seems to have distinguished it in the hands of its original inventors. Under the proceedings of the New York Medical and Surgical Society, are reported twelve cases of *Aphonia*, treated successfully by this method, accompanied by some interesting remarks of Dr. Green, to which we invite attention. From not distinguishing between the *animal* sensibility of the larynx, which is extremely obtuse, and the *organic* sensibility, which is highly exalted, physicians have been led to doubt the possibility of introducing stimulating substances below the epiglottis. We were, at first, much surprised to see how very little irritation was produced by the introduction of a sponge, saturated with a solution of nitrate of silver, 40 grs. to the ounce, into the larynx, when, in ordinary cases, the slightest drop of fluid within its cavity, excites spasmodic cough and symptoms of strangulation. It is, however, a well-known fact, that foreign bodies are often lodged in the larynx, without exciting much inflammation. For example, in the 23d vol. of the Medico-Chirurgical Transactions of London (1840), Sir Cæsar Hawkins has published a paper on the "Diagnosis of foreign bodies in the Larynx," in which he mentions a case where a girl got a bone lodged in the larynx (the vertebra in a neck of mutton), nearly half an inch long, and a third of an inch wide, the outer surface of which was rough and irregular; and yet there was no cough, nor difficulty of breathing, nor had there been any from the time of the accident: the voice, also, was natural, and there was only a slight croupy sound on inspiration. The bone was removed by tracheotomy, and the patient recovered. Mr. Hawkins calls attention to the fact that the extreme irritability is in the glottis, but that when a foreign body gets below this, there may be an entire absence of all symptoms of irritation. "It appears," says he, "that in three cases, in which a foreign body was fixed in the situation of the cricoid cartilage, below the glottis, the severe paroxysms of coughing, which are invariably looked for, as an evidence of the presence of a foreign body—(but which really belong essentially to its presence in other parts of the tube)—were entirely absent in two, and were mild in the third; so as to lead the surgeon to believe they could not arise from the entrance of the pebble, as the child asserted; and were afterwards entirely absent, in the last month of her life—that even the voice was unaffected in two of the cases, although hoarse in the third case, &c." Baron Larrey also mentions facts, in his Surgery, going to establish the same position; although Mr. Stokes tells us that a foreign body within the larynx "will produce more or less *violent and incessant* attacks of cough and dyspnœa, in which the lungs are found, on auscultation, to be sound, and the larynx to be the seat of the constriction," &c.

A brief analysis of a few cases, reported by our authors, must close the present notice.

Case 1. Miss G., aged 15, owing to taking cold, during a suppression of the catamenial discharge, had an attack of laryngitis, which became chronic, and she lost her voice entirely. Pharynx red, no pain in larynx, no disease of lungs. After using, without benefit, anti-phlogistics, emollients, gargles of alum, and syrup of *erysimum*, the larynx was

touched, at first every day, and then twice a week, with a solution of nitrate of silver, 15 grs. to two drachms of water. "At the second application, some hoarse sounds were produced during the day; after the third, the *aphonia ceased*, but the voice was still cracked; it acquired its natural character after the eighth application, and the cure was established." (Ob. 34.)

Case 2. H. M., aged 20, laboring under amenorrhœa, took cold, had sore throat, and waked up with complete aphonia. Bleeding was employed, a large blister applied in front of the neck, which was kept discharging, and other means used, without the least effect. The larynx was then cauterized; and, on withdrawing the sponge, convulsive movements, cough, and frequent spitting ensued, but ceased after two or three minutes, except slight cough and spitting. Next day, no change—some pain on swallowing: 48 hours after, aphonia had partially disappeared; patient spoke clearly. On the 3d day, voice much better; on the 4th, she spoke with facility; the aphonia had entirely disappeared, and did not return. Slight soreness remained in the larynx for a few days longer, and she left the hospital perfectly restored.

Case 3. Case of aphonia of three months, caused by chronic laryngitis, cured by one application of the caustic.

Case 4. Age 43.—The patient had been troubled with bronchial catarrh for a long time, which finally destroyed her voice—had been treated with leeches, blisters, &c., without doing good. At length, after being aphonic for three or four years, the larynx was cauterized. On withdrawing the sponge, *hiccough immediately followed, with vomiting*, and an *uncontrollable cough*, which lasted nearly a quarter of an hour. "When the cough and vomiting had moderated, we asked if the operation had caused any pain? She answered, *with a hoarse but strong voice*, that she had suffered but very little." Silence was enjoined, and an *alum gargle*. The aphonia returned. In about two weeks, the operation was repeated *with a saturated solution of nitrate of silver*, and a larger sponge, containing more of the fluid. Owing to a spasmodic closure of the glottis, the sponge was not introduced into the larynx, but the pharynx, tongue, and all the bronchial mucous membrane, was of a milky whiteness: "a violent cough and vomiting immediately ensued, and the latter continued for 24 hours, whenever the patient drank anything; still the parts were scarcely painful: there was neither fever, pain in the stomach, nor loss of appetite. All the functions were natural." Cough, with copious expectoration, without a restoration of the voice, continued for twelve days; on the thirteenth day, the voice returned at first hoarse and sharp, afterwards clearer, and remained perfect as it had ever been. In this case a saturated solution of alum and vinegar was used after the second cauterization as a gargle.

It is unnecessary perhaps to quote any more cases; the reader will be profited by reading them at length as contained in the work under notice. The usual strength of the silver appears to have been half a drachm of the nitrate to 3 ij of water, or a saturated solution: the operation was sometimes repeated every fourth day, in other instances, once a week, or two weeks, according to circumstances: using in the mean time gargles of a saturated solution of alum: or insufflations of pulverized *alum* or *calomel, one part*, and *candied sugar, seven parts*. Speaking in a whisper, or in an under tone, was enjoined, and reading slowly, but aloud, for five minutes every day. The above treatment is represented as being

generally, but not always successful, as the disease is often complicated with a tubercular affection of the lungs.

MM. T. & B. make the following observations in relation to *Pulverulent topical Remedies :*

" *Pulverulent topical remedies.*—We were led by that sure guide, analogy, to apply irritants to the larynx. We observed that collyria of corrosive sublimate, sulphate of copper, nitrate of silver, and sulphate of zinc, modified the chronic phlegmasia of the mucous membrane in ophthalmia both rapidly and happily.—Similar results were observed in the nasal fossæ, and we supposed it would be the same with the larynx: experience proved that our conjectures were well founded.

" It cannot be denied that the introduction of liquids into the larynx is attended with difficulty; the operation is unpleasant for the patient, and the sudden constriction of the glottis always prevents the medicine from penetrating far. We want, then, some method of applying therapeutic agents to the whole of the larynx, and even to the upper part of the trachea.

" Aretæus had already prescribed insufflations of powdered alum to the larynx in malignant angina, and it must be confessed that at the present day, this medicine, which has been introduced by M. Bretonneau of Tours, is one of the most powerful agents we have, to check the extension of false membranes from the pharynx into the air passages.—Aretæus's instrument was a simple reed. M. Bretonneau used a tube with a bulb in its course, traversed by gauze. These instruments were always employed by the physician or attendants when the patients were children; the patient should make his inspirations coincide with the insufflation; still the powder may fall into the pharynx, and upon the tongue, and provoke efforts of vomiting or a spasmodic constriction of the gullet, which may defeat our object.

" It appears to us much better to confide the insufflation to the patient himself. The apparatus is in fact the reed of Aretæus, a glass tube being substituted for it. This tube should be two lines in diameter, and eight or ten inches long.

" Three or four grains of the powder is to be put into one end of the tube, the other extremity is to be placed as deeply in the mouth as possible.

" After emptying his lungs by a strong expiration, the patient closes his lips upon the tube, and then by a quick effort of the diaphragm, takes breath rapidly.

" The column of air, in traversing the tube, divides and hurries along the powder towards the pharynx, but a part, suspended in the air, penetrates the larynx and upper part of the trachea. We are advised of its having entered the larynx by fits of coughing, which the patient should repress as much as possible so as to preserve the medicine in contact with the affected tissue. These inspirations are repeated more or less frequently every day, according to the state of the larynx, the nature of the powder, and the manner in which it is borne.

" We have in this manner introduced pulverulent collyria into the larynx, as easily as into the eyes. We use powdered sugar, the subnitrate of bismuth, calomel, red precipitate, the sulphate of zinc, sulphate of copper, alum, acetate of lead, and especially nitrate of silver.

" Sugar and subnitrate of bismuth may be used pure, the calomel mixed with twelve times its weight of sugar; red precipitate, sulphates of zinc and copper, with thirty-six times their weight, alum with twice, acetate of lead with seven times its weight, and the nitrate of silver, with seventy-two, thirty-six or twenty-four times its weight of sugar. These are the proportions we generally adopt, but they may be varied ad infinitum, and must be regulated by the state of the larynx and the susceptibility of the patients.

" The apothecary should be directed to prepare these powders on a porphyry slab, otherwise small crystalline asperities remain, which act as irritants and provoke repeated efforts of coughing, which do not allow the patient to retain the powder.

" When the laryngeal affection is not serious, we use the subnitrate of

bismuth. Observation XXVI. proves its efficacy, even where the disease from its commencement was owing to crude tubercles in the lungs. The following case will afford further evidence of the innocuity and utility of this substance."

"We use insufflations with acetate of lead, alum, the sulphates of zinc and copper, and nitrate of silver, in cases of laryngitis without ulceration, when sugar and sub-nitrate of bismuth have proved ineffectual. We always begin with alum, when we suspect the presence of swelling of the mucous membrane without a high grade of inflammation. Such was the case with the child cured of croup by tracheotomy, recorded in Obs. XV.

"We consider insufflations with nitrate of silver always indicated, not only when there is a simple erythema of the mucous membrane, but even when erosions or ulcerations exist; it is the article we generally use. The insufflation is made twice or thrice a week, or even every night, according to the susceptibility of the larynx, and strength of the powder.

"We never use calomel and red precipitate, which are so powerful in chronic, syphilitic, or other ulcerations, except when we have reason to believe that ulcerations exist in the mucous membrane. Such was our diagnosis with Mme. G., Obs. XXXIX. But we shall make one important remark in regard to these medicines. Practitioners have no doubt observed that when calomel or red precipitate mixed with sugar, in the proportions above mentioned, is blown into the eyes, a slight irritation follows, which lasts some hours, and if the insufflation be repeated two or three times a day, an acute phlegmasia will ensue. The same holds with the indiscriminate use of mercurial unguents.

"What we see occurring in the ophthalmic, occurs equally in the laryngeal mucous membrane. We therefore, at first, only advise two or three applications a week; experience has proved, that the symptoms grow worse if they be repeated once or twice a day at the beginning. But, as the patient becomes accustomed to them, we may and should repeat them more frequently, and also increase the proportions of the mercurials in the powder.

We repeat, we advise mercurial insufflations in laryngeal phthisis, consequent upon a common inflammation, as well as in those of a syphilitic character. They are equally applicable to both.

"*Mercurial Medication.*—A reference to the ponderous tomes on the use of mercury, and an impartial examination of the cases published to prove its efficacy, will convince us that many of the most acute and serious inflammations, many chronic engorgements and ulcerations in various situations, have been cured by this class of remedies; and, perhaps, their chief efficacy in syphilitic affections depends upon their power of modifying the general, and, consequently, the local condition of the organism, rather than upon any specific virtue, as many of our contemporaries have contended.

"Living in a country where mercury is given profusely, and, we may add, with little discretion, we have had an opportunity of witnessing its effects on most diseases. In this way, chance has perhaps shown that the mercurial plan has often effected cures in laryngeal phthisis, when so far advanced that no hope of recovery was entertained. M. Pravas, in his thesis on laryngeal phthisis, in 1824, called the attention of the profession to this important point of therapeutics."

For cases illustrating the efficacy of these remedies we must refer to the work itself. In employing the nitrate of silver for a lotion, it is important to use that which comes in crystals and not in the cylinder form, as the latter is often found to contain a portion of uncombined nitric acid, which causes considerable irritation. With respect to the propriety of resorting to this local method of treating diseases of the larynx, we should say that where, from general and physical signs, we have reason to believe that the lungs are not seriously diseased, it would be advisable to use local applications to the larynx, after the manner recommended

by our authors: but where there is tubercular disease existing, the most that can be expected from the treatment is temporary relief.

The following remarks are offered with respect to the operation of *Tracheotomy* in laryngitis:

"*Tracheotomy.*—Whatever may be the form of laryngeal phthisis, when the tumefaction of the mucous membrane and submucous cellular tissue has gone so far as to prevent the entrance of a sufficient quantity of air into the lungs, death is threatened, if we do not open a passage to the air. Catheterism is the first mode which suggests itself to the mind, and Hippocrates* proposed the introduction of tubes by the mouth. This plan was exclusively followed by physicians until Asclepiades, who first proposed the incision of the trachea, according to the method we shall presently describe.

"Desault† revived the plan of Hippocrates, which had fallen into disuse; but he asserts, that it is only practicable in cases of pharyngeal angina, when the inflammation has not invaded the larynx or trachea; for, besides the difficulty of introducing the tube through swollen tissues, its presence would cause an increased irritation. Boyer‡ was therefore wrong in blaming this practice of Desault, without adverting to the restrictions so judiciously adopted by the surgeons of Hôtel-Dieu.

"We may here introduce some reflections which will convince our readers of its inutility.

"First; the anatomical arrangement of the parts, and their respective curves, do not admit the introduction, and especially the maintenance in the larynx, of any other than flexible tubes, such as those of gum elastic. The nature of the case requires prompt action, lest death by asphyxia occur. If, then, too large a tube be used, there will be an obstacle to overcome, which will require time and not force; and if the end of the catheter be detained in the glottis for two minutes only, death would inevitably follow.

"The tube must be of medium calibre (No. 10 or 12 at most), and the respiration being performed through the eyes of the instrument, a very little mucus may obstruct it; besides, its calibre is liable to be diminished by pressure against the obstacle in the larynx, by fits of coughing or vomiting, and by efforts of deglutition. We therefore entirely reject this plan, in laryngeal phthisis, and conclude that there is no better resource than opening the air passage.

"Asclepiades was the first who recommended opening the trachea in extreme cases. Believing that the cartilaginous rings would not unite when cut, he proposed a transverse incision between them. Cœlius Aurelianus, who speaks of this operation, regarded it as quite chimerical and criminal. It has now been so often successfully performed, that we are surprised at the fears it excited in the minds of the ancients.

"Before our times, tracheotomy had only been performed for acute diseases of the larynx, to extract foreign bodies, or for the sake of dressing wounds of the organ.

"Desault was the first who made a clear exposé of the indications for the operation in laryngeal phthisis; but he never practised it. After him, almost all the physicians who wrote on œdema of the glottis, or chronic phlegmasia of the larynx, advised it as an extreme measure. At first, the operation did not succeed, because improperly performed. We have reported sixteen cases in this work, five of which were our own.

"The first case of introduction of a sound, to remedy an obstruction of the larynx, was reported by Mr. Goodeve,§ who cited Price, who had worn a canula ten years, though he does not inform us what surgeon had introduced it; but it

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* De Morb., lib. iii., cap. 10.
† Œuvres chirurgicales, tom ii., pag. 251.
‡ Traité des maladies chirurgicales, troisième édition, tom. vii., pag. 127.
§ London Med. and Physical Journal, July, 1826.

must have been anterior to the operations of Lawrence and Ch. Bell, who adopted the same expedient in 1815.

"Let us here make a few observations on the mode of operating, and on some circumstances which have occurred in our experience. We have tracheotomised seventy-eight times; seventy-three for croup, and five for laryngeal phthisis; and, therefore, have had occasion to modify the procedure and instruments.

"We shall say nothing of the first steps of the operation, from the division of the skin until the cartilage is laid bare; only observing, that if the ligation or torsion of arteries be demanded, there is no necessity to secure the veins. These vessels often tear under the forceps or thread; at any rate, no harm results from cutting them, unless their calibre be great, in which case they should be avoided or tied. When the trachea is denuded, a puncture is made, and the finger instantly applied. As many rings are cut, above and below with a probe-pointed bistoury, as may be deemed necessary, and the finger instantly placed over the incision to prevent the blood from flowing into the trachea. Then seizing the dilator, which we have described in the second volume of the Journal des Connaissances, page 4, the finger is removed, and the instrument is rapidly introduced, and opened so as to separate the lips of the wound.

"The patient is made to sit up, and the canula instantly introduced. It should be long, and of a large calibre; it immediately becomes an unyielding point of compression; and if the venous hemorrhage persist, which is a frequent occurrrence in adults with this disease, the wound may be plugged as much as you please, without preventing free access of air by the canula.

"If, on the other hand, we should wait for the venous hemorrhage to stop before we introduced the canula, it would be necessary to tie many vessels, which would require much time, and be almost impracticable; and in the mean time, an increase of the symptoms of asphyxia, and consequent continuance of venous hemorrhage, which is no doubt chiefly caused by the difficulty of respiration.

"When all the accidents have been met, and the patient has expectorated all the blood that had got into the bronchia, he should be placed on his bed, the lips of the wound should be brought together above the canula and secured with adhesive straps, and a roller pierced with a hole for the canula.

"The mucus which will accumulate in the canula must be removed; this is easily effected by a little horse-hair swab. The canula must be changed as often as the difficulty of respiration may indicate."

"After all, the operation is but a palliative, or temporary relief, if there exist any incurable disorder in the larynx or lungs: it may prolong life, but when there is only ulceration or swelling in the larynx, and when the cartilages are not necrosed, there is every reason to hope for recovery.

"The treatment, after the operation, is the same that would have been employed, had not suffocation required this more urgent duty. When the cure of the laryngeal lesion is slow, we should profit by the opening into the trachea, and introduce topical medications, which will be the better borne, because the larynx has ceased to convey air, and to contract convulsively on the least stimulus: thus, with a metallic probe and a piece of sponge, we have touched even the glottis with thick liquids, such as gum water, having calomel suspended in it; mercurial ointments, or any medicines which we may expect will exert a happy influence in modifying the state of the mucous membrane.

"If small necroses exist, the consecutive swelling of the sub-mucous cellular membrane will not disappear until the removal of the sequestrum. We have observed such a separation in the case of Dr. Evrat (Obs. No. LVII.); and in the case reported by Dr. Goodeve (Obs. No. LV.), the patient threw up, with coughing, a considerable portion of cartilage.

"But, if the sequestrum be of such a character that its elimination is impracticable, purulent fistulæ are established either into the pharynx or trachea, or even externally; and the small number of sympathetic disorders, sometimes excited by the laryngeal affection, allows the patients to live with a canula; who may esteem themselves fortunate, if the constant contact of a foreign body with

the tracheal mucous membrane does not excite unpleasant reaction in the lungs, and, finally, tubercularisation."

We conclude by expressing the opinion that the work of MM. Trousseau and Belloc is one of distinguished merit, and worthy of receiving more attention from the profession, both in this country and Europe, than it has hitherto done.

ART. XIII.—*A Treatise on the Diseases and Hygiene of the Voice.* By COLOMBAT DE L'ISERE. Translated by J. T. W. Lane, M. D. Boston, 1845.

To the author of this work was awarded by the Royal Academy of Sciences of France, the prize of five thousand francs, for his work upon the mechanism of pronunciation and his success in the treatment of errors of speech, and particularly of stuttering. The favorable and probably unique situation which he has occupied for many years, as founder and director of the Orthophonic Institution, at Paris, has afforded him such means of observation upon this peculiar class of affections, as have fallen to the lot of no other person. Although this work seems to have been written for the general reader, to make him acquainted with the physiology and the diseases of the organs of the voice, and the conditions necessary to preserve them in health; yet we think it may be equally useful to the physician, as it treats of these same subjects in a manner calculated to advance our knowledge in relation to them.

After a description of the *Vocal Instrument; the voice and its formation;* of the *mechanism of the voice;* of the *Pharyngean voice or Faucette;* the author takes up the subject of *aphonia* and *disphonia*, meaning, by the former, the incapacity of producing vocal sounds, and by the latter, an alteration of the voice which renders its emission more or less difficult, and often even painful.

We quote the following table of the *Diseases and Organic Lesions, which may cause Aphony and Disphony.*

"*First Species.*—Idiopathic cases of aphony and dysphony, arising from a physiological, anatomical, or traumatic lesion of the vocal organs.—These may be caused by the inflammations of the larynx, by those of the trachea, bronchi, isthmus of the fauces, tonsils, uvula, veil of the palate; by laryngeal phthisis, œdema of the glottis, thickening of the pharyngo-laryngean mucous membrane, atony and paralysis of the muscles of the pharynx and larynx, spasm of these organs; by falling down of the uvula, by its division with that of the veil of the palate and of the palatine bones; finally, by wounds or contusions of the larynx and trachea, or an opening situated below the glottis; finally, by the section or lesion of the laryngeal and pneumo-gastric nerves, etc., etc.

"*Second Species.*—Aphony and dysphony symptomatic of certain diseases which affect the whole economy.—These may be caused by adynamic fevers and ataxic; by some worm affections; by pulmonary phthisis; by aneurism of the aorta which then compresses the left recurrent nerve; by lesions of the spinal marrow, excessive swelling of the stomach; by apoplexy, hemiplegia, anemia, general weakness, convulsions, epilepsy, hysteria, catalepsy, chorea, insanity,

cholera, frenzy; acute moral affections, such as fear, anger, joy, etc.; finally, by the abuse of ardent spirits, and the introduction into the economy of some poisonous or narcotic substances, etc.

"*Third Species.*—Sympathetic aphony and dysphony, depending upon the reaction which results from a pathological condition of certain organs more or less remote, and having no immediate relation with the vocal apparatus.—These may be caused by a falling down or an enlargement of the womb; by the presence of a polypus in the cavity of this organ; by ulcerations situated about its neck; by the state of pregnancy; by amenorrhœa; by dysmenorrhœa; the sudden suppression or the commencement of the menses; by the swelling or inflammation of both testicles; by chronic hepatitis; a derangement of the system of the vena porta, or atony of the primæ viæ; finally, by the suppression or diminution of a natural or artificial discharge, by perspiration too long continued or suddenly stopped, especially about the feet and cutaneous surface.

"*Fourth Species.*—Specific aphony and dysphony, resulting from a primitive or consecutive remote affection, which has been conveyed to the vocal organs.—These may be caused by the venereal, scrofula, scurvy, arthritis, rheumatism, gout, psoriasis, herpes; by nearly all the exanthematous affections; finally, by the ill-managed employment of the preparations of iodine and of mercury, which sometimes give rise to swellings and ulcerations of a peculiar nature."

In chronic enlargement of the tonsils, the author recommends cauterization with the solid nitrate of silver, or a saturated solution, passed over their entire surface,—a treatment which we have found perfectly successful, and far preferable, in most cases, to excision. Where the enlargement depends on a scrofulous diathesis, the preparations of iodine, internally and externally, are enjoined, and especially gargles of iodine, 5 grs. to the ounce of water, with the use of tonic mineral waters, and bitter infusions of hops and gentian. In prolongation of the uvula, the writer recommends astringent gargles, and cauterization with the nitrate of silver, and if these do not succeed, prompt recourse should be had to excision. We see nothing particularly worthy of notice in the writer's description of the chronic inflammations of the Larynx and Trachea and primitive Laryngeal Phthisis, nor of the modes of treatment. The following remarks embrace the substance of what is offered on the latter subject:

"An absolute silence should first be directed, and, in order to leave the affected organs as much as possible in repose, the patients should be requested to resist the disposition to cough as much as they can. It would be happy for them if they could in these cases suppress the cough as they can the speech, which can be supplied to a certain point by signs and writing.

"Recourse may be had to flying blisters, moxas, small cauteries, and what has appeared to me preferable and from which I have obtained very good results, to frictions upon the sides of the larynx, with the ointment of the tartrate of antimony, till the pustules are formed. Small bleedings from the arm, to the amount of a quarter or half a porringer, the applications of leeches to the sides of the larynx, scarifying cups upon the nape or to the lateral parts of the neck, will act, at the same time, as derivative and antiphlogistic measures. Finally, the inspiration of the vapor of tar water, and especially of that of a solution of creosote water, made with one scruple of creosote to four ounces of water, may be employed with advantage. This latter measure, which I have employed with advantage, and which modifies and very quickly in some cases cicatrizes over chronic ulcers of a bad character, requires to be employed a great number of times, and to be studied with the greatest attention, that positive conclusions may be drawn with regard to its efficacy in the treatment of ulcerating laryngitis. Such observations perhaps I shall have the advantage over every other person in making, from the care which I have taken to mark the effect of this new thera-

peutical agent in chronic diseases of the larynx. During the treatment of these guttural affections, the patients should be restricted to a soothing regimen composed of porridge, gelatinous broths, feculent or other articles of diet which should have as nearly as possible the consistence of pap, in order to render the deglutition easier and less painful; finally, the same measures may be pursued towards the patients as were pointed out in the treatment of chronic bronchitis.

"When primitive ulcerating laryngitis resists the measures we have recorded, there yet remains another which we have never employed, but which appears to have met with the greatest success in the hands of the Irish surgeon *Carmichael*. This measure, which we should hesitate to adopt, regarding it as the only means of safety from a certain death, is tracheotomy performed in the manner recommended by this celebrated sergeon. As this operation is very important in its results, we deem it a duty to refer the reader to the original article in *The Dublin Medical and Surgical Journal, for* 1833."

The chapters on "Sympathetic, Specific and Scrofulous Aphony and Dysphony," contain many valuable suggestions and practical hints, that may be useful to the practitioner. "Chronic exanthematous and scorbutic aphony and dysphony," are also treated of, as well as those kinds, which are symptomatic of other affections, as from worms, nervous debility, "a cold," or hoarseness, &c. The other chapters treat of a "peculiar modification of the Laryngo-Pharyngean mucous membrane;" of "Sore Throat, or acute and chronic Inflammations of the Pharynx;" of "Coryza or Cold in the Head;" "gargles," and "Hygiene of the voice," etc.

ART. XIV.—*Twenty-fourth Annual Report of the Bloomingdale Asylum for the Insane. For the year* 1844. New York: 1845—8vo. pp. 55. *Annual Report of the Managers of the State Lunatic Asylum, made to the Legislature, Jan.* 31, 1845. Albany, 1845—8vo., pp. 53.

AMONG the institutions which confer honor upon the Empire State, stand first on the list, her hospitals and other charitable establishments. No country on the globe, and we do not say this in a spirit of vain boasting, can point to better arranged and better managed, and more successful establishments of the kind, than the "New York Deaf and Dumb Institution," the "Institution for the Blind," the "New York and Bellevue Hospitals," the "New York and Leake and Watts Orphan Asylums," and the two Lunatic Asylums above mentioned.

Dr. Earle has wisely, as we think, embodied in his first Report a more detailed account of the establishment under his charge, its condition, discipline, internal policy and progressive history, than is contained in any of the Reports that have preceded it.

We are happy to learn that Dr. Earle proposes, at an early period, to prepare a complete and detailed analysis of all the cases treated at the Asylum since it was opened for the reception of patients, thus placing the important statistics of the Institution in a condition accurately to lend their aid in the endeavor to arrive at interesting and valuable conclusions in reference to the subjects with which they are connected.

The following remarks upon the causes of insanity are highly judicious, and indicate a discriminating mind.

"Of all the objects desirable to be accomplished by the Physician of the Insane, none is more difficult than that of ascertaining the true origin or cause of the disease. In some cases, it is true, in which the mental defection has immediately succeeded an exposure to any severe shock, either physical or moral, as, for example, a blow upon the head, or the sudden loss of a near relative, there can be but little doubt upon the subject. But far more frequently the real cause is unknown and undiscoverable. Sometimes there are two or more circumstances, conditions or events, either of which might have produced the disorder, and occasionally, perhaps it may be said frequently, the *effects* of the disease are mistaken for the *cause*.

"In cases where the mental affection is either hereditary or constitutional, we believe that it never becomes manifest until provoked by some species of irritation or excitement; but in the cases included under those two heads in the table, the exciting cause was not satisfactorily ascertained.

"It is a debatable question, and one upon which medical authorities differ, whether the majority of the cases of insanity arise from physical or from moral causes, from agents immediately operating upon the body, or influences primarily affecting the mind. A difficulty in the way of determining this question is, a diversity of sentiment as to the nature of those causes; some believing that, in relation to a given agent, the primary influence is upon the body, and others supposing it to be upon the mind. Again, in a given case, one person would attribute the disease to some immediate and apparent cause, whereas another would trace it to an influence more remote. If a man suffering from grief, or the embarrassments or perplexities of business, should resort to the stimulus of alcoholic liquors, become an habitual inebriate, and, subsequently, a maniac, the mental disorder would be supposed, by some, to have originated from intemperance, by others, from the grief or embarrassments which induced that intemperance."

Dr. Earle states that the number of patients having a suicidal propensity in the Asylum, is 26, out of 106. Of these, 14 were known to have attempted self-destruction, and some of them several times, prior to admission. The entire prevention of suicide among the insane, Dr. E. thinks impossible. He mentions one instance in which a patient with suicidal propensity, was placed with his hands muffled, in a room from which every article of furniture had been removed; but who succeeded in destroying himself by getting into the window and precipitating himself head foremost, upon the floor. Another, a female patient, being deprived of every article of clothing adapted to the purpose, strangled herself with her hair.

"Should every patient suicidally disposed be placed constantly under corporeal restraint, asylums would become hideously deformed with straps, wristbands and muffs. Moreover, this method, as in the case of the man above-mentioned, not only affords no perfect security against self-destruction, but appears to increase the number of attempts, by rendering the patient more strongly determined to execute his fatal purpose. This fact is strikingly corroborated by the testimony of the officers of Bethlehem Hospital for the Insane, in London. In their last report, they say that 'from 1750 to 1770, *when every patient was under restraint*, the suicides were in proportion of 1 to 202, whereas during the last twenty years (when restraints have been but little used), the proportion has been only 1 in 963.' Thus, the actual amount of self-destruction was nearly five times as great under the old system of bodily confinement, as it is under the present method of freedom from straps and strait-jackets."

This is in direct opposition to the following opinion of Dr. Ray.—(Re-

port for 1844. Augusta, Me., 1845.) Who shall decide when such doctors disagree?

"In most cases where they (mechanical restraints) are now used in American hospitals, I have no hesitation in saying that they are far preferable to the vigilance or force of attendants. The object is gained more surely, more effectually, and with far less annoyance to the patient. A mechanical contrivance performs its office steadily, uniformly and thoroughly, and is submitted to as something inevitable. The will and strength of an attendant are capricious and variable in their operation. The strong effort is occasionally relaxed, and the idea of eluding his vigilance or overpowering his strength, is constantly present to the patient's mind. The former is mere inert matter and excites no feeling, while an attendant constantly present, watching and restricting every movement, is viewed as the author or abettor of his sufferings; his spirit is chafed, and a constant state of irritation is produced."

On the general subject of "Restraint," in the treatment of the insane, Dr. E. has the following observations:

"*Restraints.*—The means of bodily restraint, 'tranquillizing chairs,' straps, muffs, wristbands, mittens and other appliances for the confinement of the body and limbs, have been considered as necessary evils, or, perhaps, by some, as necessary promoters of good, in establishments devoted to the accommodation of the insane. Hence they have been employed, even in very recent times, to a much greater extent than was necessary.

"In our individual experience, we have found that in proportion as we have become acquainted with the insane, with their tempers, dispositions, habits, powers of self-control, and capabilities of appreciating the ordinary motives which influence the conduct of mankind, has our opinion of the degree to which these means are necessary, been diminished. Our practice has corresponded with this change of opinion, and the results have been eminently satisfactory. At the present time there is no patient in the Asylum upon whose body or limbs there is any apparatus of restraint. In the men's department, no such means have in any instance been resorted to during the last six weeks, and in but a single instance during the last three months. In the case alluded to, a patient whose ordinary conduct is unexceptionable, but who is subject to sudden and uncontrollable impulses to destructiveness, acting under the influence of one of his paroxysms, broke a chair and some windows, and his hands were confined by wristbands two days.

"The so called 'tranquillizing chairs,' which had for many years been among the means of restraint, were taken from the halls in April last, and neither of them has since been used.

"It has heretofore been customary to keep a supply of the other kinds of restraining apparatus in each hall throughout the establishment. About the 20th of November everything of the kind was removed from the men's department, and deposited in the Physician's office, where it has since remained undisturbed. And yet, during the period that we have been connected with the Asylum, there has been no equal extent of time in which there has been so general a prevalence of quiet, order, good feeling, contentment and reasonable conduct, as during the last six weeks; and in support of this statement an appeal may with confidence be made to the other Officers and Attendants of the Institution, as well as to those gentlemen of the Committee who have visited the several departments of the establishment during that time. It is not asserted, for it is not our opinion, that restraints upon the limbs are never necessary. On the contrary, we believe there are cases in which the application of them is the most judicious course that can be pursued. We once heard a patient beg most earnestly to have her hands confined lest she might injure herself. There is a female now in the Asylum who is subject to frequent and very violent paroxysms, or 'fits,' in which there is an uncontrollable propensity to bite herself. If her hands be unconfined,

she immediately plunges her teeth into the flesh of the forefinger, the upper portion of the thumb, or the arm. We have no hesitation in regard to the propriety of confining the hands in a case like this. One of the means of restraint among the most simple, effectual and least offensive to the patient, is the *Camisole*, the only distinguishing peculiarity of which is, that the sleeves are of about twice the length of those of ordinary garments. This being on, the patient's arms are folded in the manner frequently adopted by persons in health, and the two sleeves are tied together behind. Thus there is no pressure upon the body or limbs, no liability to abrasion of the skin, as with the wristbands and muffs, and the limbs are in a position as easy and agreeable as any in which they can be placed."

Dr. E. also treats, in a very sensible manner, the subjects of "Medical" and "Moral Treatment" (the latter including religious worship, instruction, manual labor, recreation, and amusements), "Attendants," "Regimen and Sanatory Measures," and concludes with a "Historical and Descriptive Account of the Asylum," &c. The Report is very ably drawn up, and does great credit to the accomplished physician who has charge of the Institution.

Dr. Brigham confines his remarks chiefly to those subjects that would most interest the public at large, and those who have friends in the Asylum. In his former report, he has gone into details possessing more interest for the profession generally, and which were noticed in a former number of our Journal. As the subject of restraint is one which is undergoing much discussion at home and abroad, and as we have quoted Drs. Earle and Ray on this point, we present the following view of Dr. B., as embodying the results of his extended observation and experience.

"*Treatment of Violent Maniacs.*—Many of this class are brought to us in chains, or with their limbs confined by strong cords. These are in all cases immediately removed, and the patient is kindly addressed and assured that he is among friends that will use him well. He is also told the truth in the presence of those who accompany him, respecting the Asylum and the object for which he is brought to it. He is then taken to the apartment he is to occupy, and permitted to have his liberty, but his attendants are directed to watch him carefully, and if he is disposed to be violent, to strike, to break the windows or the furniture, to put him into his room.

"Most of the rooms for patients are of the same size, none smaller than ten by nine feet; but those for the violent class are in some respects more comfortable; they are well ceiled with boards, handsomely painted, which makes them warmer, safer, and better for patients than those with plastered walls. The upper part of the door opening into the hall from each room, is open lattice work, so that the patient can look into the hall and be constantly seen from it. The window which lights each room, is well secured by a strong lattice shutter, so open that the patient can look into the yard or garden. If he is disposed to tear his bed or bedding, they are removed from the room during the day; and if we find from our own observation, that he tears his clothes, and that no persuasion or watchfulness on our part can prevent his doing so, we usually enclose his hands in leather muffs, or in mittens of leather or strong cloth, or apply soft leather or cloth wristbands so as to confine the hands.

"These are the only methods of restraint we adopt with the most violent patients. We never in any case use ropes or chains, and dispense entirely with strait-jackets. We occasionally have a patient who would exhaust himself by walking, jumping, or standing up continually, that we fasten in a gentle manner to a chair or bed for a short time. But none of these methods of restraint are long continued without giving the patient an opportunity of showing that they may safely be dispensed with. We much prefer that a patient should occasionally break a pane of glass or tear some of his clothing, than to keep him con-

stantly confined. We therefore give him frequent opportunities, and place before him inducements, to exercise self-control.

"As we have said, no part of the establishment is made so comfortable for patients as this, where the most violent are placed. We assign to this class a greater number of experienced and discreet attendants than to any other, some of whom remain constantly with the patients—and two of them sleep in the same apartment. The part of the building assigned to this class at the present time, is the end of the first or basement story of each wing, and which is of easy access. We have no detached or out-buildings for patients, nor do we intend to have, as we deem it important for the welfare of the insane, especially for those who are violently deranged, that they should be placed where they can be readily and frequently visited by the physicians, the matron and other officers of the establishment—both by night and by day. In the new building now erecting, larger accommodations, and in some respects more convenient, will be provided for this class, and such arrangements adopted to prevent those that are very noisy from disturbing other patients.

"The food for those that are violent and much excited, is carefully adapted to their condition, and supplied to them in such a manner that no injury will be likely to arise to themselves or others. The utmost care is taken to insure the comfort of this class of patients, by properly ventilating and warming their apartments. Their bed, bedding and clothing require and receive much attention. Some are disposed to destroy their bedding or to remove it from them, and thus liable to suffer from cold in the night.

"Such patients give us much anxiety, and we resort to various methods to insure their comfort. To prevent their suffering from cold during the night, we find nothing better than a dress made of woollen blankets, open behind, and with the sleeves and legs extending below the hands and feet, and sewed up at the extremities. This garment, covering the whole body and fastened behind, will usually be kept on during the night, though, in some cases, we have to enclose the hands in mittens. It effectually secures the patient against cold, especially of the feet, which is most difficult yet very essential to guard against during the night. During the day a few patients wear strong loose gowns, which in cold weather, for those that are feeble, are padded.

"We never allow a patient to be punished. An attendant who is known to strike, or otherwise abuse a patient, is immediately dismissed, and this is well known to all. We sometimes, however, withhold some little favor, or refuse to comply with some of the wishes of the patient, intending it to operate as a punishment for misdemeanor, or more frequently, we promise some additional gratification, such as the privilege of attending religious services in the chapel, or visiting the museum, if he will control himself in certain particulars, such as refraining from hallooing, striking, injuring his clothing, &c. We rarely shower patients with cold water, except in warm weather, and when they request it for their comfort. We sometimes do not use it when we think it might be useful, for fear of its being considered a punishment, and thus do more harm than good. We more frequently apply cold water directly to the head, without wetting any other part of the body, and this we find very useful in cases of great excitement. But we never allow attendants to do this without an order from one of the physicians; and we do not permit a large quantity to be applied—a little is sufficient in cases where any is required. We find the warm bath, especially if long continued, with cold water gently applied to the head at the same time, often very effectual in quieting excited patients, and disposing them to sleep.

"But as we have said, this is a very changeable class; often those whom we are obliged thus to treat, become better in a few days, and are placed with those that are more quiet. To no one object are our efforts more constantly directed, than to diminish the number of this class, and to dispense with all kinds of restraining apparatus, although we most firmly believe, after much reflection and inquiry, and repeated attempts to entirely dispense with it, that some restraining apparatus such as we have mentioned, is not only essential for the comfort of patients, but in some instances preserves their lives."

We lately had the pleasure of spending a day at the State Asylum,

and observing the management of the establishment in all its departments and details; and we feel it to be a duty, as it is a pleasure to state, that although our expectations had been highly raised, with respect to the mode in which it was conducted, and especially the kindness, skill, humanity, and devotedness of the superintendent, and his able assistant, these expectations were more than realized. The two hundred and sixty inmates seemed to constitute, in reality, a large and well regulated, well-behaved private family; and all sat down to their meals, at well-arranged, well-furnished tables, and conducted with as much decorum as boarders at the Astor. Although we slept two nights in the building, we heard no screams, nor cries, nor noise of any description; and as we looked into every nook, and hole, and corner of the establishment, and saw no chains, nor cords, nor strait-jackets, no "tranquillizing chairs," or straps, or muffs, or wristbands, or even mittens, we do not believe that any of these articles exist in the establishment. If they do, Dr. B. keeps them locked up mighty close. We also attended divine service with the inmates on Sunday in the chapel, where the Rev. Dr. Rudd, of the Episcopal church, officiated, and we never saw a more orderly congregation or one more attentive. The singing also was first rate. In the evening we attended a musical party, composed of the best singers among the patients in the establishment; and we have rarely heard an equal number discourse more *rational* or sweeter music. We should have had no suspicion of the insanity of a single one of them, if we had not seen them in such a place, or, as we say, under suspicious circumstances. The secret of the whole is, there is a *head* to the establishment—a main-spring, regulating the movements of all the inferior cog-wheels, and giving regularity and order to all its complicated machinery. Well may New Yorkers pride themselves in their Lunatic Asylums.

Art. XV.—*Report of the Medical Missionary Society in China, containing a General Survey of its Operations, from March*, 1843, *to June*, 1844. Macao: 1844.

From the above Report, for which we are indebted to the kindness of Dr. Macgowan, late of this city, it appears that over 15,000 Chinese patients are now annually attended by the six physicians attached to the different Missionary Stations in that country; and that over 30,000 have availed themselves of foreign medical aid, since the commencement of Medical Missions in the Celestial Empire. Considering the violent prejudices of the Chinese against foreigners, and everything foreign, this must certainly be regarded as the highest possible proof of skill on the part of the physicians—whom, like all other foreigners, the natives had been taught to regard as uncivilized, ignorant, and barbarous. Drs. Hepburn and Cuming are located, it appears, at Amoy—Drs. Macgowan and Carter at Ningpo—Dr. Hobson at Hongkong—Dr. Lockhart at Shánghai, and Dr. Parker at Canton. On looking over the list of cases, treated at the different stations, we are surprised to see how large a proportion labor under diseases of the eye. Out of 3,764 cases treated at

Shánghai, there are 236 of ulceration of the cornea, 88 of ptosis, 89 of leucoma, 108 loss of both eyes, 73 of one eye, 58 cataract of both eyes, 32 cataract of one eye, 56 incipient cataract, 26 amaurosis, 57 closure of pupil, 44 staphyloma, 15 hernia iridis, 192 catarrhal ophthalmia, 326 granular lids, 326 do. with opacity, 79 granular lids with pannus, 153 entropium, 97 ectropium, 40 trichiasis, 61 contraction of tarsi, 138 pterygium, &c. Has opium-smoking anything to do in the production of these diseases?

From Dr. Lockhart's report, we quote the following passages:

"Intermittent fever was also met with in a large number of persons. Gastrodynia prevails also to a great extent. Diseases of the eye were as numerous as in other parts of China. One case of cataract presented itself, and both eyes were successfully operated on. One case of confirmed mania was noticed in a respectable woman, 50 years old, the mother of a large family.

"It was mentioned, in the former report, that intermittent fever prevailed to a great extent at Chusan. This opinion was confirmed by the large proportion of cases, which again presented themselves, and the beneficial results of quinine were well remembered. The cause of this frequency of ague is, no doubt, attributable to the marshy state of most of the large valleys throughout the island.

"Elephantiasis. Several cases of this malady, in its worst form, were seen, and the persons thus afflicted were chiefly residents of the valley named Yentsáng, which is very wet and marshy at all seasons of the year. The patients were, for the most part, agricultural laborers. Three cases of attempted suicide, by the eating of prepared opium, are mentioned in the list. In one of these, the quantity swallowed was half a tael (a little more than half an ounce). The case was seen soon after the poison had been taken; free vomiting was induced, and the patient recovered. The cause of this attempted destruction of life originated in a quarrel with a fellow servant, about some articles of food which had been stolen from their master. Some weeks afterwards, the same man again took opium, because, in a dispute with some of the females of his family, one of them bit him severely on the hand, which excited the laughter of the others against him. This time, the dose taken was but small, and its effects passed speedily away. The second case was in a man who suspected his wife of unfaithfulness to him. The third was that of a woman whose husband had beaten her, because she wasted his money. The quantity of opium swallowed, in both these cases, was small, and the effects passed off after the evacuation of the stomach by copious vomiting.

"Four cases of attempted suicide are mentioned, by swallowing a solution of salt and water. It is supposed, by the natives of Chusan, that if water be allowed to percolate through a quantity of common salt, half a pint of the strong solution thus produced, if swallowed, will cause death. Sometimes an infusion of tobacco is added to the solution; this, of course, would be more or less injurious, according to the strength of the infusion. In one of these cases, a weak infusion of the tobacco had been added, but without producing any other effect than nausea and vomiting. Although it is said, by the people, that death often ensues after taking the solution of salt, still in the cases of attempted suicide, by this means, to which aid has been solicited, no such effect, or the apparent likelihood of it, has ever been produced. Two of these instances were women, who having been beaten by their husbands, wished to revenge themselves, by casting the guilt of their death on them, or perhaps merely to frighten their offending partners. Another was a young woman, who took the solution because her grandmother would not allow her to wash her clothes when she wished to do so, whereat she was so much offended as to think it better to die than to live. The last case was that of a man, who, having had a dispute with his sister's husband, about some money of trifling amount, which was not settled to his satisfaction, on that account attempted suicide.

"The case of severe gunshot wound of the thigh was the result of accident. A gentleman was out shooting in a boat. During his absence, one of the boatmen, carelessly taking up the gun to look at it, raised one of the hammers, which, slipping out of his fingers, the gun went off, and the contents were lodged in the

back of his fellow-boatman. When the man was brought to the house, a very extensive lacerated wound was found at the posterior part of the thigh, and the flexor muscles of the leg were much torn. There had been considerable hæmorrhage, but no large vessel appeared to be involved in the mischief. The man was placed in as comfortable a position as possible; simple dressing applied; extensive sloughing of the surface of the wound took place at first, followed by profuse suppuration, and the wadding and charge of shot was removed a fortnight afterwards, through an aperture that formed on the lateral part of the thigh. The man's strength did not fail, healthy granulations filled up the cavity in his thigh, cicatrization progressed rapidly, and when the patient was sent home to Chinhái (in consequence of the closing of the hospital at Chusan), but a very small portion of the wound remained open.

"A Fukien man was frequently seen at Tinghái, of a strong, robust frame of body, who had seven toes on each foot, and six fingers on each hand. There were two great toes on each foot, the supplementary ones projecting inward: both were strong and well nourished; the five smaller toes were of full size. He had also two thumbs on each hand, the outer being a little smaller than the true thumb; the other four fingers were of usual size."

"The case of gunshot wound through the pelvis, was in a little girl, eleven years old; she was standing near the military exercise ground, while the soldiers were firing at a mark, and she was accidentally wounded. She was seen four days after the accident, February 10th, when it was found that the ball had passed through the pelvis, entering very near the right trochanter, and passing out anterior to the left trochanter. The child had suffered very severe pain; was wholly unable to stand; the right thigh was slightly bent on the body, and could not be extended without inducing much suffering: fæces were passing per vaginam, but little constitutional disturbance arose, and fever existed only in a slight degree. On the 18th, fæces began to pass through the wound on the right side; this continued for three or four days, and then ceased; free suppuration was now flowing from both wounds, and from the vagina. It would appear that the ball had passed through the lower part of the pelvis, opening a communication between the rectum and vagina; the bones of the pelvis on both sides, and the os femoris of the right side, were most probably injured, but to what extent could not be ascertained. The limbs were kept in as comfortable position as possible; water dressing applied to the wound, and though the suppuration was very great at first, it has gradually diminished, and the wounds are now (April 31st) very small, the evacuations are almost wholly confined to their proper channel. The little patient sits up for a short time every day, her appetite is good, and there is every prospect that she will soon be well, though she will doubtless go lame all her life.

"The large tumor in the neck was in a man of 50 years of age. The tumor, an encysted one, as large as a man's head, was pendant from the horizontal ramus of the lower jaw, and the lateral part of the neck, and not attached to any of the deep-seated fascia. The tumor had existed for 25 years, and caused the patient so much annoyance that he was very anxious for its removal. He was accordingly admitted into the house, and the following day the tumor was removed. Considerable hæmorrhage occurred during the operation, but this soon ceased, and three arteries only required the ligature; a great portion of the wound united by the first intention; the ligatures came away by the 9th day, and in three weeks the man was discharged perfectly well, and very grateful for the attention that had been paid to him. The people who heard of this case were much astonished, as they had not previously imagined that such an operation was practicable. Several cases of the malignant form of Asiatic leprosy have presented themselves, some of whom came regularly, and are of course very anxious for relief; but it is feared that little can be done for their benefit.

"Elephantiasis does not exist here to so great an extent as at Chusan; but, in one of the cases, the left thigh and leg were of an enormous size; the circumference of the lower part of the thigh being 27 inches, and round the calf of the leg also 27 inches. Confirmed cases of elephantiasis may perhaps be considered incurable; but if regular treatment be commenced at an early stage of the disease, there may possibly be some prospect of success.

"The case of suicide by opium eating occurred in a man from Ningpo. He had been out of work for some time, and on this account wished to put an end to his life. As near as could be ascertained, he had taken two drachms of prepared opium, about 4 hours before he was visited; he was conscious, but laboring under great oppression. Pupils much contracted, the presence or absence of a strong light producing no change on them; free vomiting was with much difficulty induced, and other means employed, so that it was hoped the man would recover; he however sank and died during the night. Almost all the cases of cataract operated on were admitted into the house; two women could not be received as in-patients, for there was no accommodation for females; but both these cases were doing well when last seen. Of those taken into the house, one was a respectable old man, a Chinese physician from the town of Páushán. The cataract in the left eye was extracted, but a portion of the vitreous humor escaped during the operation, and the sight of that eye was not restored so perfectly as had been anticipated. The cataract in the right eye was depressed, and when he returned home, the power of vision was increasing. For the most part the other cases were successful. In a few the power of vision was only partially restored, owing to changes that had taken place in other parts of the eye besides the lens, interfering with the healthy action of the organ. Within the last few days a lady from Súchan, and two respectable merchants from the same place, afflicted with cataract, have applied for relief, and will shortly be acted on.

"Of the three cases in which the operation for artificial pupil was performed, one was tolerably successful; in another, after the pupil was formed, it was discovered that the retina had lost its power; and the third was found to be complicated with cataract, which latter has yet to be removed. The number of cases in which one or both eyes were lost, is very large, the destruction of the organ being for the most part caused by severe catarrhal ophthalmia; in numerous instances from long continued entropium, and also from the effect of small-pox pustules on the cornea."

"At Shánghái, numerous bathing-houses are met with, which are established by private individuals, as a source of profit. They are, for the most part, large commodious houses, kept very clean; and great numbers of Chinese constantly resort to them at all hours, more especially in the latter part of the day. The price for a bath is six coppers cash, exactly one farthing; for the bath and a cup of tea, nine cash. In the front of the house there is a large hall, fitted up with great numbers of boxes and compartments, in which the visitors place their clothes; all these boxes are under the charge of a door-keeper, who gives the bather a clean towel, and is responsible that no transfer of property occurs during the absence of the owner. A passage leads from the hall to the bathing apartment, which is a small room, the greatest part of which is taken up by a large water trough made of tiles—this is filled with water, and kept hot by a fire placed underneath; planks are placed across the trough on which the bathers sit in the steam and wash themselves, or get into the water at pleasure. The water is changed once every day; and, although this would not suit the ideas of an European, in respect to cleanliness, the Chinese do not regard it, and appear to enjoy the bath as much in the evening, as when the water is first put in earlier in the day. This establishment (the attendance at which is of course entirely confined to the men) must be a great source of cleanliness and comfort to the people, who have the advantage of a hot bath at a very low rate of charge. The average daily attendance is about a thousand. Similar bathing-houses are also kept at Ningpo."

ART. XVI.—*The Cyclopædia of Practical Medicine, Parts* XXI., XXII., XXIII., XXIV. Philadelphia: Lea & Blanchard. 1845.

THESE numbers complete the work. Both publishers and editor are entitled to commendation, for the regularity with which the different parts of this excellent publication have been carried through the press. We congratulate the profession on having so valuable a Cyclopædia placed within their reach, on such reasonable terms. In some respects it is more comprehensive, in others less so, than the great Dictionary of Dr. Copland, now in course of publication, and the merits of each are so distinctive and peculiar as to prevent the sale of the one from clashing with that of the other. The truth is, that *both* are indispensable to the physician who wishes to be armed at all points, and fully up to the science of the day. We may allude to a few points in which the two Dictionaries differ from each other. One is written by some sixty different contributors—the other by a single hand. The one gives a very just view of the present state of British medical theory and practice, and of the peculiar views of the particular writer, on each subject that passes under discussion; the other is a complete digest of the medical literature of all ages and nations, with a full account of existing opinions and practice.

The one contains distinct articles on dietetics, and the materia medica —the other has no separate essays on these subjects, but brings them in, in connection with the different diseases, and states of the system in which they are indicated. Each plan has advantages on which we need not dwell. The one omits *Medical Bibliography;* the other (Copland) has a very full and valuable one at the end of each article; to which the Editor appends the titles of the most important American works, with references to such articles on each subject, as are contained in our Medical Journals.

Other points of difference might be noted, but it is unnecessary. He who is in possession of both these Cyclopædias, will own a Medical Library, rich in every department of the science, and superior in value and utility, to what is generally to be found in the offices of American physicians. And both may be had for the small sum of twenty dollars.

ART. XVII.—*Elements of Comparative Anatomy of the Vertebrate Animals designed especially for the use of Students.* By RUDOLPH WAGNER, M.D., Professor of Comparative Anatomy and Physiology in the University of Gottingen, etc., edited from the German, by Alfred Tuck, M. R. C. S., New York. J. S. Redfield, 1845—8vo., pp. 264.

DR. WAGNER is the worthy successor of the illustrious Blumenbach in the University of Gottingen. He was born at Baireuth, in the year 1805, and after graduating in medicine at Wurzburgh in 1826, he repaired to Paris, and placed himself under the tuition of the celebrated Cuvier, where he pursued his studies in Natural History, spending much time in the Garden of Plants, and the various Museums with which that city

abounds. He afterwards visited the coasts of Normandy and the Mediterranean, and spent some months at Marseilles and Nice, investigating the Zoological relations of the lowest classes of organized beings. From thence he sailed to Sardinia, still pursuing his investigations in Natural History, and in 1840, he was unanimously invited to fill the vacant Professorship of Comparative Anatomy and Physiology made vacant by the death of Blumenbach. He has already published several important works, all remarkable for perspicuity of arrangement, and clearness of description, showing that he is one of the best Comparative Anatomists of the age. We know no Elementary work in the English language which presents in so small a compass, and at so reasonable a price, the substance of all that is known upon the Anatomy of the several classes of the Vertebrate animals.

The clearness and brevity of the style is not the least recommendation of the work—the typographical execution, as well as binding, reminds us of the handsomest publications of the British press.

ART. XVIII.—*A Treatise on Poisons, in relation to Medical Jurisprudence, Physiology, and the Practice of Physic.* By ROBERT CHRISTISON, M. D., F. R. S. E. First American, from the 4th Ed. Edition. Phila. Barrington & Haswell. 8vo., pp. 756.

WE are happy to announce an American Edition of Prof. Christison's invaluable work on poisons. Heretofore, there has been no good book on this subject accessible to the profession in this country,—a deficiency which happily exists no longer. When we consider the objects of Toxicological Science; how it supplies antidotes for the various poisons; furnishes the physiologist with valuable instruments of research in his investigations into the laws of the animal economy; how it aids the physician in his inquiries as to the action of many energetic drugs; how it collects from the numerous branches of medical knowledge, as well as from collateral sciences, the materials of the most important department of medical jurisprudence; when we consider all this, and how it saves the physician much unnecessary labor, by laying down the general principles by which the search for new antidotes must be regulated, we shall have a faint conception of the importance of this branch of modern medicine.

Its chief and most important application, however, is to medical jurisprudence. We have not time, nor is it necessary for us, to point out the indispensable necessity that now exists, for every medical man to make himself perfectly acquainted with the Toxicological department of this science.

The work of Prof. Christison, being recognized, by common consent, as the standard authority on this subject, it is unnecessary to do more than announce the fact of its publication.

ART. XIX.—*Hydropathy, or the Water-Cure; Its Principles, Modes of Treatment, &c.* Illustrated with many cases, compiled chiefly from the most eminent European Authors on the subject. By JOEL SHEW, M.D. 2d Edition, Revised and Enlarged. New York: Wiley & Putnam, 1845., 12mo. pp. 360.

THIS work of Dr. Shew has been placed in our hands for notice, and we accordingly have looked over its contents. It contains very little of the experience of the writer, and very few of his own views, but is made up chiefly of extracts from the writings of Capt. Claridge, Drs. Johnson, Scudamore, and a few others. As a specimen of authorship, the work will never take a very high rank; but it may be serviceable to the writer as a mode of advertising—of letting the public understand that the author practises *Hydropathy*, and may be found at such a number, in such a street.

Dr. S. begins by telling the reader in the preface, that "he early learned to distrust the existing systems of medicine, and was on the look out for something better," in short that he "had no confidence whatever in medicine, both before and after he had commenced the study of it." We had always supposed that ignorance and prejudice were matters rather of concealment, than boasting; yet here is a man who avows himself the subject of both, and glories in what ought to be his shame. Did it never enter Dr. Shew's mind that the fault might possibly exist in his own understanding; that it was quite as probable that he was wrong, and the rest of the world right, as that he was right, and the whole world wrong?

Now, this whole matter of hydropathy lies in a nutshell. Does all medical science consist in the application of cold water? Is there no other remedy? No state of the system to which some other mode of treatment could not be better adapted—can cold water do everything, can it reduce a hernia, or amputate a limb? Has not water, hot and cold, in various modes of application, always been in use as a medicinal agent, from Hippocrates down to the present time? Where is the well educated physician who does not recommend, at times, the cold, hot or shower bath, the vapor and sulphur baths; and cold sponging, &c.; and who would not recommend them much oftener, were conveniences for bathing as general as they ought to be? Dr. S. falls in with the vulgar notion, that every physician is bound hand and foot by some terrible "system;" under whose untoward sway he is driven, "*nolens, volens*," to certain modes of practice to the neglect of all others, though better perhaps than those he himself pursues. Nothing can be more erroneous. Physicians of the present day, if not formerly, are influenced but very little by theory—they select remedies of every kind, and from every kingdom of nature; they do not reject one article because it is a mineral, nor choose another because it is a vegetable—if they bleed, it is to obviate a greater evil by at most a lesser one; they do not turn their backs upon a medicine, because it has been introduced by an Indian, an old woman, Hahnneman, or Priessnitz; experience is the test to which everything is brought; and the experience of the whole medical world in favor of existing modes of practice is worth, in our estimation, more than that of Dr. Shew, in favor of the *cold water cure*.

The "*cold water cure*," moreover, is a decided misnomer. Take Priessnitz for example. Most of his disciples tell us that the cures effected

at his establishment, have resulted from the application, external and internal, of cold water; whereas, *pure air, exercise*, and *simple diet*, together with abstinence from spirituous liquors, and regular hours, have had far more agency than the former. With respect to diet for instance, *Priessnitz* prohibits all *brandy*, and other distilled spirits, *wine, beer, coffee, tea, spice, chocolate, pepper, cloves, mustard, salt-fish, and meat, and spiced meat*, &c., and the food, which is of the plainest kind, is mostly served *cold*, and *cold-water* is the only drink at table. As regards *exercise*, he enjoins a walk, at least twice a day, in the open air, and each time for an hour. He directs the body to be warmed, even in the coldest weather, by exercise, and not by exposure to artificial heat; these, with other observances of an equally important nature, certainly justify us in the conclusion, that *cold water* is not the most efficient therapeutic agent employed. We admit that the hydropathic, or rather the *hygienic* treatment is of superior value in many cases of chronic disease, when judiciously pursued; but to regard it as some do, in the light of a *panacea*, or to believe that *cold water* is to supersede all other medicinal agents, is in the highest degree absurd. As used by the advocates of the system, we have no doubt that it causes very great injury in many cases, being carried beyond what the powers of the system can bear, and employed, too, without regard either to the nature or seat of the disease.

And yet, after all, there is a good deal in hydropathy that we like—we think we have found good in *Thompsonianism;* something in *Homeopathy*, that may possibly be turned to good account; something in *Mesmerism* that cannot be gainsayed; and a great deal in *Hydropathy* that is really excellent; just as the bee extracts honey from poisonous flowers. We like to see people, and especially females, who have been brought up in effeminacy and indolence, and strangers to thorough ablution, dash and splash, and rub and scrub themselves in cold water; there is something exhilarating even in the thought of perfect cleanliness of the skin, and we think we see a fresher glow upon the cheek, a brighter eye, a lighter step, a more brilliant countenance, a more cheerful mind, a better heart, at every douche of the pure element. Individuals brought up in wealth and luxury and idleness,—whose skins have acquired such a degree of sensibility, that, if the "winds of heaven visit them too roughly," they are immediately thrown into a chill—who are, consequently, suffering during a great portion of their lives from colds, and coughs, and other similar affections, will find immense benefit from the hydropathic treatment, and if they cannot become inmates of a hydropathic establishment, they will do well to provide themselves with a shower-bath, or a sponge and tub, by which cold water may be applied to the surface every morning. We go for hydropathy to this extent, and even for the application of the douche to every part of the body in succession; for we have found this one of the best tonics in nervous cases that we ever tried; and in cases of *fever*, with hot and dry skin, and vigorous circulation, we think very favorably of the application of the *wet sheet*, with external warmth, and have no doubt that perspiration will sooner be brought on under such circumstances, by such treatment, than by any other.

Our large cities, owing to the great progress of refinement and luxurious habits, abound in individuals, who need, and would be benefited by the strict discipline of a hydropathic establishment, provided, however, the treatment were not carried quite as far as that of Priessnitz. If some strong-minded, self-willed mountaineer could be found, so ignorant as to

be obliged like Priessnitz, to employ a Secretary to sign his name, and carry on his correspondence ;—if such a man would open an institution at Lebanon, or Schooley's Mountain, or some other part of the country where the patients could have the benefit of mountain air and mountain scenery, plain food, hard exercise, and a plenty of cold water, there can be no doubt that he would draw the fashionable, and the wealthy, and meet with very flattering success. But his knowledge must be *intuitive*. His learning, like Dogberry's, must come by nature. There is no *bone-setter* like your *natural* one, and there is no medical wisdom or skill, like that of the seventh son's, which is acquired by inheritance. Dr. Shew need not make the attempt, for he tells us he was bred to the profession, and labors under the insuperable obstacle of a regular education.

But let no one imagine that many of our democratic citizens will ever submit to the discipline of the great German water-doctor. It may do for Princes and Princesses, Counts and Countesses, Dukes and Dutchesses, Barons and Baronesses, Generals, Governors, and other civil officers, —but it will never be submitted to by independent republicans. We are not so fond of *liquid*-ating, as all that. For, only follow, in imagination, one of Priessnitz's spleeny hypochondriacal patients, through the events of a single day. We take our history from the written statement of an eye-witness. At four o'clock A. M., a servant unceremoniously enters her bed-chamber, throws off her bed-clothes, and proceeds without delay, to wrap her closely in a blanket, and to cover her with a feather bed, placing a thick counterpane over that and tucking all tightly in. In a short time she is in profuse perspiration—a vapor-bath—cold water is brought, and she is told to drink freely and often ; she sweats and drinks, and drinks and sweats for the space of two, or three, or four hours. It is now eight o'clock. She is unswathed ; the bed is removed ; cold water is dashed upon her head and neck ; straw-shoes are put on her feet ; she walks to a cold bath in an adjoining room ; cold water is dashed over the whole naked body, especially the head, neck and chest, or dripping with perspiration she is plunged into a cold bath, where she remains some ten minutes, then is dressed and takes a long walk, drinks a quart or two of cold water, and goes to breakfast. After breakfast her ladyship takes another long walk, every now and then stopping to swallow a tumbler of cold water. By eleven o'clock she returns from the ramble among the hills, and is ready for the douche. What that is, may be understood from a lithograph on the frontispiece of Dr. Shew's book, where a poor emaciated invalid is seen seated on a board, while a stream of water is pouring down from some twenty feet above his head, over his naked shivering body. After having been "drenched" sufficiently, she dresses for dinner. If the patient is a little timid, or fears that the shock may be too severe, she is let off with the *wet-sheet*, instead of the douche. (This is only a sheet wet with cold water, and wrapped several times round the patient, who is then enveloped beneath a feather-bed, as in the former process, and on emerging, plunged again, over head and ears, into a cold bath, and then dressing and to dinner as before.) Dinner takes up nearly two hours, which seems decidedly aristocratic ; but then when we reflect that there are two or three hundred invalids, sitting down together, each one of whom has his or her "experience" to relate, and to hear that of his or her neighbor, the wonder is that they get through in so short a time as they do. Another excursion now follows of two hours, on foot, among the hills, and punctually at four P. M., we find our sub-

ject again comfortably packed up in wet-sheets; or mummy-like, swathed in coarse muslin, and loaded with a feather bed; or seated on the hard plank aforesaid, with a douche, like that of an over-shot mill-wheel, pouring over the water-soaked body. This pleasant amusement is kept up till 7 P. M., when she again plunges into the cold-bath, and thus fills up the time till 8, by dressing and walking, when she is ready for her cold supper. After supper, she either walks, or converses (about her case) till 9 o'clock, when she again tries the cold-bath, or a seat-bath, or a wet-sheet, and having drank another quart or two of cold water, she retires to rest, very well satisfied with her day's work, her feet and legs being carefully wrapped in wet clothes. It ought to be stated, however, that between the regular periods of bathing, much of the time is generally appropriated to *half-baths, sitting-baths, foot-baths, head-baths, and wet-compresses, &c.* If the patient has a sore throat, the neck is to be bound up with a wet towel; if he have rheumatism or gout, the same application is made to the affected limb; if he has weak digestive organs, he must constantly wear a wet bandage round the body; always remembering to drink as much cold water as possible—thirty glasses a day being considered a very moderate quantity. This treatment we are told is delightful—the patients in a short time submitting to it "with equal hilarity and conscientiousness."

When carried to this extent, however, consequences of rather an unpleasant kind are sure to follow. Dr. Nuonde, an eye-witness and personal friend of Priessnitz, tells us that "after four or five weeks, the effect manifests itself by critical fevers and eruptions, rash, furuncles, or ulcers," but that these very phenomena are indicative of success, and will be readily cured by cold fomentations. Besides this critical fever, he informs us that "colds, diarrhœa, and constipation are usual occurrences in the case, by means of which and the ulcers, nature ejects all noxious matters from the system, and for this reason they never ought to be interfered with, even if they should threaten to become obstinate and habitual, since they can always be cured at any time, by seat-baths, fomentations, drinking and sweating, according to the circumstances of the case."

These are the effects of what Dr. Shew calls "a *natural* remedy, intensified by *art*," altogether too intense for us, we must confess. Dr. S. denies that the water-cure treatment is QUACKERY. That depends entirely on the manner of practising it. We should say without hesitation that to denounce all other medicines, *en masse;* to condemn the existing modes of practice—to hold up hydropathy in the light of a panacea—to deny that it ever does injury, and maintain that it always does good; to do this, and say this, and publish this to the world in a book, is what we call *quackery*, and that of the grossest kind; if not quackery, it is deplorable ignorance.

Dr. S. asserts, that "nothing is easier than by the water-cure to produce, to any given extent, *directly opposite results.*"

Suppose then that it be misapplied; that directly the "opposite results" are produced from what is intended. What then? Will Dr. S. tell us?

We are glad, however, to see attempts made to introduce the hydropathic treatment into this country. There is no danger of its ever prevailing among us to any great extent. *Hydrophobia* is altogether too prevalent for that. We believe that it will lead to a more general and free use of cold water, and to the practice of those hygienic measures,

which experience shows to be necessary for the due preservation of health. Too much, indeed, cannot be said in praise of COLD WATER—for we believe in the old Spanish proverb that "*though no saint, it performs many miracles.*"

ART. XX.—*Recent Improvements in Arts, Manufactures and Mines, being a supplement to his Dictionary.* By ANDREW URE, M.D., etc. Illustrated with one hundred and ninety engravings. New York, D. Appleton, 1845—8vo., pp. 304.

ALTHOUGH not belonging to medicine, this work contains many articles of great interest to the physician as well as to the general reader, and is an extremely valuable addition to the original work. Among the articles which it contains, we may mention Arrow Root, Acetic Acid, Alum, Beer, Biscuits, Bitumen, Bread, Calomel, Chocolate, Distillation, Fermentation, Evaporation, Gelatine, Gums, Hops, Madder, Oils, Prussiate of Potash, Saccharometer, Starch, Stearine, Sugar of Potatoes, Tea, Sulphate of Ammonia, Mineral Waters, Tobacco, Artificial Yeast, Alkalimetry, Ventilation, &c. These, together with many other subjects, are treated of in a very minute and scientific manner; and altogether the work is one which every person ought to have who aims to keep pace with the discoveries and improvements of the day.

ART. XXI.—*Human Magnetism, its claims to Dispassionate Inquiry, being an attempt to show the utility of its application for the relief of human suffering.* By W. NEWNHAM, Esq., M. R. C. S. L. New York, Wiley and Putnam, 1845—12vo., pp. 396.

WE had intended to take up the subject of Mesmerism in our present number, at least so far as it is connected with "surgical operations during the Mesmeric sleep," but our limited space will not allow. There is, however the less occasion to discuss the subject in our pages, as the New York reprint of the London Lancet, No. IV., contains a very elaborate history of the whole matter, from the pen of Dr. Hall, to which we would refer our readers. As this is to be continued in future numbers, we hope that, when completed, it may be republished in a separate form.

The work of Dr. Newnham is undoubtedly the most candid and rational treatise in favor of Human Magnetism that has yet appeared. There is a certain class of persons whose minds are so constituted that they would believe all its marvels, were they a thousand times stranger than they are; while, on the other hand, there are others, who would not believe in its pretensions, were they confirmed by proof a thousand times more conducive than has ever yet been offered. So that we see no

probability of the question ever being settled, as to the reality of its claims; but foot-ball fashion it seems destined to be kicked from one party to the other (those who have no better employment) in all time to come. Those who wish to see what can be advanced in its favor by a man of candor and science, will do well to procure the work of Mr. Newnham.

ART. XXII.—*The Forceps. Journal of Dental Surgery and the Collateral Arts and Sciences.* London. 1844–5.

WE have received several numbers of this excellent Journal of Dental Surgery, and hope hereafter to receive them regularly. It seems to be conducted with admirable tact and judgment, and so far as the dental art is concerned, "to show the very age and body of the time, its form and pressure." Such a publication seems absolutely necessary to raise the art of dentistry in the estimation of the public, and its professors to a just sense of their own duties and importance. It also contains a great variety of articles on medicine, hygiene, and other scientific subjects, and seems adapted not only to the wants of the dentist, but to the general practitioner, and non-professional reader. The dentists of our own country are entitled, however, to the credit of having pointed the way in this department, as the American Journal of Dental Surgery was the first publication of the kind ever issued from the press. We hope that both these Journals will advocate the necessity of a thorough medical education in order to the intelligent and successful practice of the dental art; for without such, it can never acquire that respectability and influence, which it ought to possess, and to which it is justly entitled.

ART. XXIII.—*A Synopsis of the Symptoms, Diagnosis and Treatment of the more common and important Diseases of the Skin, with sixty colored figures.* By N. WORCESTER, M. D., Prof. of Physical Diagnosis and General Pathology in the Medical School of Cleaveland, Ohio. Philadelphia. 1845. Large 8vo., pp. 202.

THIS is a very careful compilation, and supplies a desideratum, long felt in the profession in this country. It is the first concise treatise, containing colored illustrations of the different forms of cutaneous disease, afforded at such a price as to be within the reach of all, that has yet appeared among us. The author has succeeded in giving accurate descriptions of the more common forms of these affections, and pointing out the most appropriate treatment; and the authorities, whom he has quoted, are those only who are recognized as taking the lead in this department of science. The work forms an excellent text book, both for teachers and students, and it will prove no less useful to the general practitioner.

ART. XXIV.—*A Dictionary of Practical Medicine; comprising general Pathology, and Treatment of Diseases, Morbid Structures, &c.* By JAMES COPLAND, M.D., F.R.S. Edited with additions, by Charles A. Lee, M.D. Parts V. and VI., pp. 288. Harper and Brothers, 1845.

WE are happy to learn that such is the demand for this work, that a second edition of the Nos. (which are stereotyped), has already been called for. The Mass. Medical Society have also subscribed for nearly 800 copies, to place in the hands of all their members: altogether, it promises to be the most successful medical book ever issued from the American Press. We are authorized to state, that the work will continue to be issued regularly till completed, and that the remainder of the book is in such a state of forwardness in England, that but little if any delay will ensue, after completing what has been already published, before the entire work is concluded.

ART. XXV.—*A Conspectus of Pharmacopœias of the London, Edinburgh, and Dublin Colleges of Physicians, and of the United States Pharmacopœia; being a Practical Compendium of Materia Medica and Pharmacy.* The Third Am. Edition. Edited by CHARLES A. LEE, M.D., Prof. of Gen. Pathology and Mat. Med. in Geneva Medical College, N. Y. H. G. Langley, 1845—18mo., pp. 315.

THIS is a still more Complete edition of the conspectus of Prof. Thomson, than the last, which was very speedily exhausted. The additions by the Am. Editor exceed in amount the original contents of the work, and consist of condensed notices of all the new remedies,—those embraced in the new American Pharmacopœia, and those scattered through our medical journals. The present edition differs from the last, chiefly by the extensive additions made to the toxicological part, which is now a very complete manual on that important subject. The practitioner here has, within the small compass of a pocket-book, all that he will need in cases of emergency, when suddenly called to cases of poisoning. Amidst the multiplicity of thoughts and cares incident to the practice of medicine, it is not every one that has all necessary knowledge at his finger's ends. It will hardly do, in such cases, to follow the homœopathic method of writing down *all* the symptoms, and then go home and look over our books, to find the antidote; such a proceeding borders too much on the *expectant* plan of treatment, ever to become very popular, in cases of this kind; as a substitute, we know no better plan than to buy this book, and carry it always in the pocket. We bespeak for it the continued favorable regards of the profession.

PART THIRD.

1.

Foreign Medical Intelligence.

ANATOMY AND PHYSIOLOGY.

1. *The Spleen and its Functions.*—The observations on the functions of the spleen have elicited the following facts. 1. The greater part of the water, received into the body, is admixed with the venous blood of the spleen in a few minutes, by which means a great distension of this organ is effected. 2. The splenic veins, leading to the vena portæ, are filled during the digestive process with a darker blood than the other veins of the body. 3. The spleen has been extirpated in some animals (chiefly herbivorous), without any peculiar injury to the system, with the exception of a slight derangement in the process of chylification. 4. The spleen, possessing no eductory canal, can have no influence on the formation of chyle. 5. The periodical accumulation of blood in the spleen, particularly during digestion, makes it appear to be a mere reservoir of blood for the organism, favoring perhaps chylification by its pressure on the stomach. 6. The lymph, passing from the spleen, is redder and more coagulable than that of other organs. After the extirpation of the spleen, the lymph, as it passed into the thoracic duct, was white, thin, slightly coagulable, and, only after it had been exposed some time to the air, did it assume those properties of redness and greater coagulability, usually communicated through the influence of the spleen. 7. After the extirpation of the spleen, a more abundant urinary secretion takes place, the urine being thin and watery. 8. The bile has, in this case, a much darker color and an altered taste. 9. The volume of the spleen is enlarged, and the texture relaxed, by intermittent fever, as well as by typhus abdominalis. In explanation of the above facts, it is shown that the larger viscera of the body, and particularly of the abdominal cavity, have a specific attraction or relation to the elements of which the organism is chiefly composed, and by which it is reproduced: i. e. oxygen, hydrogen, carbon and azote: the lungs to oxygen, the kidneys to azote, the liver to carbon. Now, hydrogen alone remains, which is not always found combined with oxygen, in the form of water, in the organism, but also (pathologically) with other gases in the blood. The spleen seems to form the point of attraction for this hydrogen, a view confirmed by the fact, that in all countries in which an excess of hydrogen is found in the air, and thus received in the blood, affections of the spleen are chiefly produced. Thus, we may say, that the spleen has a specific relation to hydrogen, separating it from its combinations, in order to elaborate it for its peculiar organic purposes. Thus, water undergoes a decomposition in the spleen; the *hydrogen* is carried with the blood of the splenic veins to the liver, and used for the secretion of bile. This accounts for the dark color of the venous blood of the spleen, during digestion; therefore, the bile becomes changed in character, and the urine watery, after extirpation of the *spleen*. The oxygen of the water is absorbed by the lymph, and produces the color and coagulability proper to this fluid. In intermittent fever, the spleen becomes enlarged and softened, in consequence of the hydrogen collected in it. In perverted, or obstructed, function of the spleen, the water is left in the blood circulating through the body, and produces abnormal and morbid phenomena in consequence. The, so called, *splenic vertigo*, appearing under the form of a derangement of the functions of the brain, seems to be produced by this abnormal reception of hydrogen into the blood.—*Dr. Frank of Berlin in Casper's Wochenschrift.*

2. *An Account of Prof. Mulder's Chemical Physiology of red coloring matter of Blood.* By Dr. Golding Bird.—Mulder sets out by observing that the function of the red coloring matter must undoubtedly be an important one, inasmuch as it exists in such a large number of animals otherwise so distinct in their structure and habits, although at the same time it must be admitted that this substance is not absolutely essential to animal life, as it is wanting altogether in some tribes of animals. Regarding its origin, it must be assumed as being capable of being actually generated, *de novo*, in the organism, as it does not exist in the vegetable kingdom; consequently it cannot, like protein, be traced to the elements of food in the case of the herbivora. It is hence fair to presume, that if generated by the vegetable feeder, the carnivora must possess a similar power.

The coloring matter is normally enclosed in a sac or cell composed of a thin membrane, consisting chiefly of protein, and capable of admitting of percolation through its walls under certain circumstances, although it generally retains the colored fluid it encloses sufficiently firmly to prevent its admixture with the serum. Within the sac is a nucleus of similar chemical composition to the membrane, and the whole thus organized constitutes the *blood-disk*, *globule*, or *red particle*.

It has generally been assumed, that hæmatosine exists in two distinct states in venous and arterial blood; the former containing, according to the received hypotheses, most carbon or carbonic acid, and the latter most oxygen. These distinctions are founded solely on differences in color, and are unsupported by a single analysis. It was supposed, that in the lungs the red particles of venous blood exhaled carbonic acid, and absorbed oxygen in altering their tint to that of arterial blood. It is now well known that analogous changes of color are produced by merely immersing a piece of black venous clot in a saline solution, the vivid vermilion tint being assumed without any change in the proportion of oxygen.

A considerable proportion of coloring matter may be removed from a clot of blood by digestion in alcohol containing either sulphuric acid or ammonia.

The coloring matter of blood freed from other matters invariably presents the same constitution, viz.:—

44	atoms Carbon	=	264
22	—— Hydrogen	=	22
3	—— Nitrogen	=	42
6	—— Oxygen	=	48
1	—— Iron	=	28
			404

If a current of chlorine be transmitted through a solution of coloring matter of blood, the iron leaves the other elements, forming a chloride of iron, and the atom of metal thus removed is replaced by six of chlorous acid,* and the following compound is formed

$$(C_{44} H_{22} N_3 O_6) + 6 (CO_3).$$

During this process, the red color of the hæmatosine is destroyed, and the new compound appears as a white flocculent precipitate. It must not, however, be assumed that the mere removal of the iron by the chlorine destroyed the color, for that metal may be removed without materially affecting the red hue of the hæmatosine. For this purpose, let some dried coagulum of blood (consisting chiefly of red particles and protein compounds) be macerated in concentrated sulphuric acid; after some days, water may be added, and the remaining excess well washed on a filter. During the action of the acid on the clot, *hydrogen gas is evolved*, and the iron dissolves, forming a proto-sulphate, which passes through the filter. The colored matter is left behind preserving

* Mulder regards this acid (Chlorige-saure) as composed of CO_3 and not of CO_4, as generally assumed. The former is the composition assigned to it by Count Studion.

its original red hue, notwithstanding the removal of the iron, mixed with a combination of protein with sulphuric acid, in the following proportions :—

	C	H	N	O	
1 atom of iron-free hæmatosin =	44	+ 22	+ 3	+ 6	
1 atom of protein =	40	+ 31	+ 5	+ 12	+ 1 atom of Sulphuric acid.
4 atoms of water		4		4	
	84	+ 57	+ 8	+ 22	+ 1 atom SO_3

If, instead of digesting mere coagulum in the acid, pure red particles be substituted, the experiment is more satisfactory. For this purpose, allow blood as it escapes from a vein to fall into a solution of nitrate of potass. The coagulation of the fibrin is thus prevented, and a dense deposit of red particles falls to the bottom of the vessel; these, when well drained from adhering serum, and dried, may be mixed with strong sulphuric acid; *hydrogen gas is evolved just as when metallic iron is digested in the acid*, and after some days a solution of sulphate of iron is obtained, and the insoluble red coloring matter is thus left free from iron, but retaining its peculiar tint. The non-ferruginous hæmatosin consists of:

$$C_{44}\ H_{22}\ N_3\ O_6\ .$$

Having thus proved that the color of red particles does not depend upon iron, Mulder next proceeds to combat the doctrine that these bodies are "carriers of oxygen," and that iron is oxidized during respiration, as assumed by Liebig: an assumption which forms the basis of that philosopher's theory of respiration.

It appears that iron is so intimately connected with the other elements of hæmatosine, that it cannot be removed even by long digestion of red particles of blood in hydrochloric or dilute sulphuric acid. Consequently, even if no other explanation of the absorption of oxygen during respiration existed, these facts are sufficient to show the high impossibility of the iron being oxidized in the lungs, since it will not yield to hydrochloric acid. The converse has indeed been stated by Liebig, but his statement that weak acids remove iron from clots of blood, is explained by the fact that all the albuminous elements of blood contain a portion of this metal in a state which admits of ready solubility in acids.

If, as is assumed in Liebig's theory, sesqui-oxide of iron existed in arterial, and proto-carbonate of iron in venous blood, almost any dilute acid would be capable of dissolving out the oxide, which, as we have seen, is not the case. The fact of the iron really existing in the metallic state is moreover strongly supported by the evolution of hydrogen gas which occurs when sulphuric acid is digested on the clot, as pure red particles; this metal probably exists as an integrant component of hæmatosine, just as iodine does in sponge, sulphur in cystine, and arsenic in the curious kacodyl series of compounds; thus :—

C_4, H_6, As, = Kacodyl.
C_4, H_6, As, + 0 = Alkarsin, or Oxide of Kacodyl.
C_4, H_6, As, + 30 + 3 aq. = Alkargin, or Kacodylic acid.

Further, if iron existed as sesqui-oxide of hæmatosine, and is removed by strong sulphuric acid, the residual iron-free matter ought to consist of—

$C_{44}, H_{22}, N_3, O_{4\frac{1}{2}}$, instead of C_{44}, H_{22}, N_3, O_6, which is really left, or hæmatosine, $= C_{44}, H_{22}, N_3, O_6, Fe$—$Fe\ O_{1\frac{1}{2}} = C_{44}, H_{22}, N_3, O_{4\frac{1}{2}}$

—consequently the actual results of analysis are opposed to Liebig's theory.

From experiments of Scherer, it appears that when scarlet arterial ox blood is beaten to separate fibrin, and diluted with thrice its volume of water, it assumes a venous hue, and a current of oxygen gas transmitted through it, does not redden it. The mixture of a little oil, milk, chalk, or gypsum, with the black blood instantly restored its florid hue, so that the red color is owing to other circumstances than the absorption of oxygen. Scherer indeed concluded that the arterial color depended on white opaque particles diffused through the fluid.

It appears to have been observed by Hewson, that bright red blood-corpuscules are always bi-concave; these may therefore be supposed to reflect a great amoun

of light, and thus act like the white reflecting particles of chalk, milk, &c., in Scherer's experiments. In dark-red blood, the corpuscules are convex, and the enveloping membrane much thinner than in bright-red blood, so that light passes easier through them, and they readily burst, allowing their contents to mix with serum when blood is largely diluted with water: the well known effects of saline solutions in reddening blood is readily explained by their producing exosmosis, and consequently, a partial emptying of the sac of the blood-corpuscules, which then becoming doubly concave mirrors, reflect much light, and cause the fluid containing them to present an arterial tint. A current of carbonic acid gas will cause such blood to become again black, by altering the form of the reflecting corpuscules, causing them to become bi-convex.

Protein readily combines, as we have seen, with oxygen, and forms a soluble tritoxide and insoluble binoxide, both frequently being formed simultaneously in health, and abundantly so in inflammation, constituting the buffy coat of inflamed blood. In the process of healthy respiration these oxides are formed, and immediately tend to solidify, as we see in "buffy coat;" they fix round each blood-corpuscule, therefore; virtually making their investing membrane thicker and more opaque, better enabling it to reflect light, and producing the bright red color of arterial blood. If we conceive such a layer of oxy-protein (buffy coat) to form round each blood-disc, and to go on contracting, it would produce a "cupped" state of two surfaces of the corpuscule (just as is seen on the upper surface of inflamed blood), and by converting them thus into double concave lenses, produce a condition more favorable for the powerful reflection of light, and necessarily heighten the light red color of arterial blood. On reaching the capillaries, the coating of oxyprotein is removed, the protein being employed for the repair of tissue, and the oxygen used for effecting the metamorphosis of effete and exhausted structures. The corpuscules losing their opaque covering, have their power of reflecting light diminished, their concave surfaces are lost, and the whole assumes a venous tint.

When a piece of black venous clot is exposed to the air, it becomes red, in consequence of absorption of oxygen, not by the coloring matter, but by the protein; and the opaque oxy-protein causes the mass to reflect a red light, just in the same manner that dark venous blood does when in a vessel of "milk-glass." A drop of an alkaline fluid destroys the red color of the clot by dissolving the oxy-protein.

Digested in salt and water, a black clot becomes red by partly emptying the corpuscules by exosmosis, and by thickening their investing membrane. The subsequent washing with water removes the salt, fills the corpuscules by endosmosis, thus altering their figure, and diminishing their reflecting power, and causing the clot to look nearly black.

All dilute acids, even the carbonic, blacken blood by altering the figure of the corpuscules, and dissolving the reflecting layer of oxy-protein round them.

Scherer regards the conversion of black venous into red arterial blood to depend upon the loss of carbonic acid, the absorption of oxygen, and the presence of reflecting particles of the white opaque contents of the thoracic duct. Mulder believes the simple formation of the oxides of protein to be a sufficient explanation. He does not consider that when carbonic acid blackens blood it affects the red particles further than by physically altering their investing membrane by diminishing its reflecting power. He refers the very black color of portal blood to such a state of the corpuscules, either from the action of carbonic acid, or more probably of a little free alkali (soda).

The real function of red corpuscules remains yet to be discovered; all evidence appears opposed to their playing any part of importance in the process of respiration. Mulder believes that they are generated from the normal constituents of the blood in the general circulation. Their destination is obscure: if they undergo a metamorphic change prior to their development into living tissue, the products of their decomposition may be probably traced to the *bilifulvin* of the bile. (In all probability, the red particles act physiologically, as has been suggested, in constituting the elements of many living tissues, playing the part of nucleated cells, as, indeed, is now pretty generally admitted.)

The following is a brief summary of the above views of Mulder:—

1. The red particles of blood contain iron as a simple element, combined with nitrogen, carbon, hydrogen, and oxygen, and are chemically identical in venous and arterial blood.

2. In traversing the capillary system of the lungs, the protein of the blood combines with oxygen, generating a compound analogous "buffy coat," which forms a contractile covering to the blood corpuscules; causing them to become more opaque, and giving them the figure of doubly concave lenses.

3. In the general capillary circulation, the oxy-protein surrounding the corpuscules is decomposed, the oxygen being used for dissolving old tissue, and the protein deposited to supply its place. The corpuscules lose their reflecting concave figure, and become more transparent by this change.

4. The difference of color between venous and arterial blood depends solely upon a physical difference in the surfaces of the corpuscules; being semi-opaque concave mirrors in the latter, and mere transparent convex bodies in the former.

5. Whatever alters the figure of the corpuscules, or gives blood the power of more powerfully reflecting light, at once alters its tint.

6. During respiration, the coloring matter of the blood undergoes no change, and indeed plays no part, either as a whole, or in regard to the iron which exists as an element in it.

7. Iron is not essential to the red color of blood corpuscules, although its presence is probably necessary for their formation and development.—*London Medical Gazette.*

MEDICAL PATHOLOGY AND PRACTICAL MEDICINE.

3. *Albuminaria—Albuminous Nephritis—Inflammation of the Malpighian Corpuscles—Granular Disease of the Kidneys.* By Chas. Kidd, Esq.—This formidable derangement of the urinary system is chiefly characterized by the presence of a large quantity of albumen in the excretion—attended sometimes with blood-globules—a diminution in the normal proportion of urea and salts—a change in the specific gravity, generally diminished in the middle and final stages, and is usually attended or followed by dropsical effusion into the cellular tissue or serous cavities of the body.

Rayer, who has written at considerable length on this affection, describes six forms of organic lesion of the kidney—two of an acute character, and four of a subsequent chronic form of the disease not less intractable. As these various morbid alterations of the kidney are often met with in the same individual, and are all alike followed by an appearance of albumen in the urine, we shall only glance very briefly at his distinction. In the two first forms there is considerable tumefaction of the cortical substance, which exhibits numerous red spots similar to those visible on the surface corresponding to the glands of Malpighi, and which are highly injected with blood; hence Dr. Copland's peculiarly apposite name for the disease, which, perhaps, explains more than any of those applied to it by the other authors. In the third form the kidneys are still larger and heavier than in health, but do not present any red patches or morbid appearance. The fourth form, described by Dr. Bright as the granulated texture of the kidneys, is remarkable for the kidneys, especially their surfaces, becoming yellowish, dotted, and sometimes covered with minute spots of a milky white, covered with a yellowish hue, which are often elongated, and give very much the appearance as if small portions of milk-curd had been dropped irregularly on the surface of the kidney. They are imbedded in its cortical substance, and contrast strongly with the red hue of the tubular portion; the periphery of the kidney or the base of the cones is where the granular degeneration is usually most evident. The fifth form is marked by a further enlargement and degeneration of the Malpighian corpuscles; and in the sixth, the kidneys become indurated, irregular, and tuberculated.

Symptoms.—The acute form of the disease not unfrequently commences with shivering, soon followed by the general phenomena of fever. The urine may be little changed for a while, but is usually scanty and of a deep brown or reddish color, not unlike the washings of fresh meat. It is acid; its specific gravity is

often above and seldom below the average standard, the proportion of the urea and salts in this particular stage being little affected. If allowed to rest it deposits filaments of a fibrinous character—a certain quantity of this principle, according to Rayer, being usually mixed with the excretion. The odor of the urine is very feeble urinous, at the end of about twenty hours exhaling a peculiar smell not unlike beef soup. Under the microscope it presents numerous blood globules, occasionally mucous globules, and always lamellæ of epithelium. Left to rest it exhibits a sediment composed almost entirely of these globules, epithelium and fibrinous flocculi; a deposite of uric acid seldom occurs, being more frequent in the chronic form of the disease. If pleuritis, pneumonia, or other inflammatory disease be present at the same time, the tendency will be to an increase of the specific gravity. Occasionally there is a certain degree of distress, and even of pain, in voiding the urine, owing to a sympathetic irritation of the bladder; but in a few rare instances, perhaps, to the difficult passage of fibrinous concretions along the urethra. There is almost generally a dull aching and sense of uneasy constriction or weight in the loins; these symptoms are sometimes greater on one side than on the other, but are never so severe as in simple inflammation of those organs. These symptoms have not long continued before signs of dropsical effusion make their appearance, in some cases with extraordinary rapidity: in short, this is one of the most constant and characteristic signs of the disease: it is first noticed as puffiness of the eyelids and face; at other times, it first affects the limbs, and extends to other parts of the body; occasionally erratic, it ceases in one part and makes its appearance in another; the skin is usually hot, and does not pit readily, except on strong pressure. In addition to these symptoms, the tongue is usually furred, the stomach is sick, and rejects everything, and occasionally also the patient is troubled with a cough. If blood be drawn, Rayer says, it will be found buffy, the serum occasionally milky; but this appearance is much more frequent in the chronic than in the acute form of the disease.

Causes.—Exposure of the body to cold or damp, or whatever has the effect of suddenly checking perspiration—as, for example, drinking a cold fluid while the skin is hot or sweating, is unquestionably the most frequent cause of the acute form of the malady. This is very remarkable in the form of the disease which usually follows scarlet fever, where albuminous urine comes on with great rapidity after incautious exposure to cold during the period of desquamation. It is to cold also that we can trace the increase and frequent relapses when it has even once been checked by judicious treatment; hence, also, its frequency amongst tradesmen subject to rapid changes of temperature—as bakers, workers in glass, and distilleries, &c.; want of cleanliness in the latter, according to Fourçault's researches, would seem to be even a more active cause.

Diagnosis.—The acute form of this derangement of the urinary system may easily be recognized by the albuminous, often sanguinolent, condition of the excretion, by the rapid formation of anasarca, and occasionally of dropsical effusion into some shut cavity.

Chemical properties and modes of detection.—The urine when first passed is generally slightly acid; in some few cases it is neutral; in fewer still, alkaline; its odor is very feebly urinous; specific gravity variable, oscillating about the healthy standard; the proportions of urea and salts very little altered; when exposed to heat it rapidly coagulates, often forming a solid opaque mass. The addition of nitric acid causes it also to coagulate, particularly if assisted by heat. If these tests exhibit little or no marks of albumen the prussiate of potash will often detect proportions of this principle very minute. The specimen under examination must first, however, be rendered slightly acid by a few drops of acetic acid, and the solution of the prussiate then added. If either serum or chyle be present in the fluid, an opalescence more or less marked will also follow the use of any of these tests.

Treatment.—As the chief causes of this variety of the affection are usually cold and moisture, a very primary object with the practitioner should be to prevent the impression of these agents on the system, especially among the poor, when, for obvious reasons, the precaution is more necessary. From the essential nature

of the disease, it is very obvious that blood-letting will stand among the first modes of cure which deserve his attention. The detraction of blood, either from the arm, or by means of cupping from the loins, will prove of very essential service, the quantity necessary to be removed depending on the severity of the inflammation and the age of the patient. Emollient cataplasms over the loins have been used by some practitioners, but from their clumsiness are not very generally tried. The patient should be rigidly confined to bed as long as any febrile state of the system exists, and obliged to drink copious libations of demulcent and slightly diuretic fluids, though, as a general rule, the latter are not much to be persisted in. The warm bath, when it can be obtained, will be of the most essential use, and saline aperients (the sulph. magnesiæ, sulph. sodæ), avoiding, for obvious reasons, the tartrates and other vegetable salts. Where cerebral symptoms occur, as in a case given in the sequel, more active purgatives, as jalap, gamboge, scammony, will be necessary. If the stomach and bowels happen to be very irritable, with vomiting or diarrhœa, warm baths, small doses of opium, and the application of leeches to the arms, according to the French mode of practice, have been recommended. The food should be light and unirritating; jelly, gruel, and milk, will be perhaps amongst the most useful articles.

Chronic albuminous nephritis is incomparably more frequent than the acute form of the disease; it is often the consequence or result of the latter, but in by far the majority of instances it possesses the passive character from the commencement. In persons of a scrofulous constitution, observes Rayer, or whose health has been damaged by a former illness, the urine, which a short time previously exhibited no abnormal phenomena, I have not unfrequently seen assume all the characters observed in cases of chronic albuminous nephritis, with general dropsy. This change sometimes comes on without any appreciable cause; at other times it seems to be due to the influence of cold and damp. It is generally very obscure in its origin, and more frequently met with than the previously described form of the affection. The generality of the cases mentioned by Rayer were either work-people, whose occupations expose them to wet and cold, or persons living in damp, unhealthy dwellings. The intemperate use of spirituous liquors also increases the predisposition to this formidable malady, Doctor Christison, for instance, believing that three-fourths, or even a larger proportion of cases in Great Britain, are attributable to this practice. Rayer states that he had seen several cases in which pregnancy also appeared to have an influence in the production of this disease. Scrofula and syphilis are powerful predisposing causes, or indeed any affection of a cachectic tendency, especially in those who lead an intemperate life, and are much exposed to changes of weather. Pulmonary consumption has also a marked effect, as likewise organic disease of the heart, in producing the disease; it is an affection more frequent in males than females, and generally takes place between the twenty-eighth and fortieth years of life.

Properties of the urine.—The urine when recent is almost always acid; in some cases neutral or alkaline; it is in contradistinction to that last described, pale and not unfrequently opalescent, somewhat like whey, in which small flocculi have been dispersed; its odor is faint, and very different from that of the secretion in health; its specific gravity is usually below the normal standard, and in some cases very considerably so; under the microscope it exhibits epithelial scales of a whitish color, blended with mucous matter. The want of transparency is owing to the presence of a fatty matter, which may be removed by æther. Examined in a glass phial we notice on its surface and against the sides of the glass numerous bubbles. The action of the heat and nitric acid at once produces a coagulum, as in the last described variety. The yellow prussiate of potash reacts also in a similar manner.

These alterations of the urinary excretion may continue for some months before anasarca sets in, which it will be almost sure to do sooner or later. In the morning and evening signs of hydropic effusion, which the eye of the medical man cannot by possibility mistake, at length set in. In the morning the eyelids are observed to be puffy, and towards evening the ankles betray a similar tendency; the latter does not so readily subside by rest as that from disease of heart—a point of diagnosis which requires attention. A curious fact has frequently been

mentioned by authors, by Nysten, Guibourt, and Dr. Barlow—namely, the presence of urea in the fluid thus deposited in the system, depending possibly on an imperfect action of the "Malpighian Corpuscles."

Diagnosis.—The diagnosis of this form of urinary derangement is not unattended with difficulty: however, when the excretion is found to be of low specific gravity, and contains albumen with only a small portion of urea and urates, the presence of this disease may be regarded as certain, especially if no disease of the heart exists at the same time. In diabetes there is the presence of sugar to guide us: in point of fact, there is, perhaps, not one symptom of albuminous nephritis, either acute or chronic, that is not occasionally met with in other maladies; and yet it is equally true that there is a series of symptoms which belongs only to this disease, and by which its existence may generally be detected.

Treatment.—In the chronic form of this disease our utmost efforts, perhaps, will only achieve a practical suspension of the morbid action. If we suspect any increased action of the vascular system of the kidney to exist, cupping-glasses will be found useful, at the same time recollecting that depletion, as a general rule, especially amongst the poor, ought to be avoided. A means which should never be neglected consists in the establishing of an issue in the loins, which will prove of very eminent service. Rayer has in several cases seen great benefit from the internal use of cantharides (ten or twelve drops of the tincture in an emulsion). Dr. Wells treated five cases of dropsy, in which the urine was coagulable, with large doses of the tincture of cantharides (from thirty to sixty drops in the course of the twenty-four hours). In three of these cases there was a marked amendment; in one the albumen disappeared. Rayer conceives it to be an uncertain remedy, and one that may prove dangerous in the hands of the inexperienced. Squills and digitalis have been used with some benefit, but are likely to disagree with the stomach. Purgatives, associated with diuretics, have been recommended by Dr. Prout. The nitrate of potash, with the tartrate, and spiritus æther nitrosus, will be found a very convenient mode of ordering these medicines. Blisters, if kept almost constantly applied, may do some good; but in general, like everything else which has been put forward with such vaunted powers over the disease, they will be found merely temporizing in their effects. The diet and regimen of the patient should be strictly antiphlogistic.

The treatment of these two modifications or stages of albuminuria is evidently of a different—nay, possibly, of an opposite character, suggesting for consideration an interesting question—namely, whether the sequence of the latter or chronic stages are invariable on the former or acute stage; and whether such complete structural disorganization as that now known as "Bright's Disease," originates in this way. This the opinions of the best observers of the disease would lead us to answer in the affirmative, clearly showing that this formidable malady is more under the control of the physician than is generally considered, by attacking it in its *earlier* stages. Rayer, however, says, that in individuals of a cachectic habit the disease assumes a chronic form from the commencement; and it is not a little remarkable, notwithstanding the very essential function of the system implicated, with what obscurity the first symptoms of the disease make themselves known. A dull obtuse pain in the region of the kidneys, often absent for a time, is the only thing recollected; no suspicion of anything of a dangerous character is entertained, and the fatal anasarca makes its appearance. The eyelids and face become puffed; not unfrequently the limbs are the parts first affected, which become tense and œdematous. If the affections of the kidney have not progressed further than that of hyperœmia, as very often occurs after scarlatina, there may be sickness of stomach and vomiting. The most prominent sign, and that for which we are usually consulted, however, is the anasarca, clearly indicating the grave necessity there exists for examining the urine in every case of this disease. Nor is the negative evidence afforded by the absence of albumen of less interest in the prognosis of this affection—nay, it is often of more value at the bedside, as it enables the physician, not unfrequently under circumstances the most unfavorable, to hold out a ray of comfort in cases almost beyond hope, and those only who are familiar with the sick, under such circumstances, can properly estimate what the cheering promise of the

physician can effect—what masses of dark and evil-boding despondency will give way before one gleam of hope thus flung across the otherwise dark and despairing void.—*Dublin Medical Press, Jan.* 15.

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4. *Treatment of Typhus.*—Dr. Davidson, in the *London and Edinburgh Medical Journal*, thus sums up the treatment of typhus fever. He considers that, as typhus is a disease which cannot be checked *in limine*, and is often tedious in its progress, causing great emaciation and exhaustion, measures which may vitally lessen the powers of life, such as bleeding, vomiting, and excessive sweating or purging, ought not to be used without very strong and special reasons. The ordinary measures may be the following:—Place the patient in a large, well-ventilated apartment, on a mattress, with few bed-clothes; let the head be shaved, and kept cool with an evaporating lotion, give a gentle purgative every second or third day, let the skin be bathed once or twice a day with tepid water, and this moy be accompanied with small doses of tartarized antimony, antimonial powder, or ipecacuana. The drink should be light, cooling, and slightly diuretic; and the diet nutritive, but light, and little liable to acescency. When there is a tendency to congestion in any organ, a little calomel, or hydrargyrum cum cretâ, may be combined with the purgative, or calomel with a small quantity of opium may be given every six or eight hours. The application of two or three leeches to the temple or nostrils is often useful in congestion of the brain, and also where there is intense head-ache, which is often the forerunner of delirium. Blisters are also often advantageous in such cases. Derangement of particular functions, or symptoms arising from idiosyncrasy of constitution, sometimes occur, and must be treated accordingly. Mercury in small doses is frequently useful in promoting several of the secretions, and in relieving the congestion of internal organs. Opium is injurious in a large proportion of cases, from its tendency to cause congestion in the head; but where diarrhœa is a symptom, it ought to be administered with a view to check the exhausting evacuations. Wines and other alcoholic liquors, as they contain both stimulant and alimentary elements, are the most to be relied on for supporting the strength, and are the least injurious. The pulse, taken along with the general symptoms of exhaustion, may be held to be the rule for its exhibition, both as to time and quantity. Ammonia, camphor, quinine, and other similar tonics, are not to be depended on in bad cases; and when exhibited together, frequently cause the patient to refuse both. When the disease is complicated with local affections in the head, chest, and abdomen, they must be treated on the same general principles as the idiopathic disease which they represent, with this important modification, that evacuations of all kinds must be employed more sparingly, and with much caution; and that even in these cases, if there be much prostration of strength, and a very weak pulse, wine must be administered, although more moderately than in the simple disease.

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5. *Speculum Uteri.*—Dr. Warden, who has recently introduced prismatic specula, with the view to illuminate, and to reveal to observation, disease in the depths of the open cavities of the body, including the interior of all the hollow viscera of the pelvis with their outlet, has recently recommended, in the pages of the *London and Edinburgh Medical Journal*, a speculum uteri, consisting of an ivory tube, with a corresponding piston or plug, one side or portion of which tube is removable at pleasure, so that when the piece is taken out while the speculum is in the vagina, an extended lateral view of the passage in every part of its wall may be obtained.

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6. *Icthyiosis Intra-Uterina.*—Dr. Smellie has published a case of this kind in the *London and Edinburgh Medical Journal.* The child was a male; the labor tedious, but not severe. The body was covered with a thick, smooth, and shining epidermis, fissured in many parts, more especially about the neck, in the axillæ groins, and popliteal spaces; all over the breasts, abdomen, and towards the lumbar region, there were large fissures, of a red and raw appearance; the arms and legs were somewhat œdematous, and had a pellucid appearance, from the horny nature of the epidermis; the fingers and toes, on which the rudiments of nails

were scarcely perceptible, resembled artificial appendages, rather than natural formations; the head was covered with hair, and the scalp was entirely free from fissures. There were some small fissures on the face, about the angles of the mouth, which was so much distended that the lips could not be brought together; near the external side of each ala nasi there was a horny excrescence in the epidermis, about the size of a hemp-seed, and also about the external canthus of both eyes, which were entirely concealed; the inner lining membrane of the eyelids protruded in the shape of a bloody tumor. The child lived seven days, and during that time, the epidermis was detached in large pieces, particularly where the fissures were most numerous, and the bloody tumor concealing the eyes gradually disappeared. The sufferings of the child, Dr. Smellie says, must have been very severe.—*Medical Times, Dec.* 21.

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7. *Emplastrum Lithargyri Compositum.*—The efficacy of this plaster has been greatly aided by the plan of dissolving the galbanum and ammoniacum in alcohol, and then adding the evaporated solution, with the turpentine, to the other ingredients. The resins being more readily soluble in strong alcohol, the author justly condemns the prescription of Soubeiran, according to which weak alcohol is to be employed.—*Jahn: ibidem.*

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8. *Form of Adhesive Plaster, peculiarly suitable for Bandaging Issues, &c.*

℞ Resin, burgund. ℥ vj.
Cer. alb. puriss. ℥ iv.
Terebinth. commun. ℥ ij.
Sevi ovill. ℥ j.

Liquata et colata agitantur, ut albescant, et in emplastra formentur. Sign. emplastr. adhæsiv.—*Dr. Sutro, in Medical Times, Dec.* 21, 1844.

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9. *Poisoning by Hydrocyanic Acid.*—Mr. Godfrey has published, in the *Provincial Medical Journal*, a case of poisoning by prussic acid, which involves some points of interest, not from the symptoms presented, but from the time which must have elapsed, after the imbibition of the poison, before death occurred; and also on account of the various acts of volition performed by the suicide after he had swallowed the acid. It appears that, on the morning when he committed suicide, one of his daughters accompanied him to his office, where they were seen standing together; he sent her away with a message, and, after taking off his great-coat, proceeded to a room up stairs. After a short interval, he was seen to walk hastily out of the house, in the direction of the druggist's shop. He must have swallowed the poison—about half an ounce of prussic acid—when up stairs, for the bottle was found in the fire-place the following morning, the stopper on the table. It is presumed that he took the acid before placing the bottle on the fire, as no glass nor similar utensil was found in the room; he must then have gone to the head of the stairs, a distance of ten average paces, descended the stairs, seventeen in number, and proceeded to the druggist's shop, forty-five paces—realizing a total of fifty-five paces and seventeen stairs. He entered the shop in his usual manner, which was slow and steady: the druggist (a personal friend) asked him how he did? He replied in his usual tone of voice, "I want some more of that prussic acid." The druggist passed round the side and end of his counter to speak to him, and then perceived that he was in the act of placing his hands upon him, as if for support, his eyes being fixed upon him with a stare. The druggist said to him, "You have been taking the prussic acid?" to which no answer was made. He was then placed in a chair, but fell to the ground and died soon after Mr. Godfrey's arrival. Although the facts above detailed are highly interesting and important in a medico-legal point of view, inasmuch as the suicide might avail himself of this knowledge to conceal his act, or an ingenious counsel might take advantage of it to confuse the medical witness, and thus obtain the murderer's acquittal, yet it is somewhat imperfect in its details. A knowledge of the amount of anhydrous acid contained in the preparation taken by the suicide, would add greatly to the value of the facts as the character of the effect produced might then be more correctly estimated.

10. *Succus Conei.*—Dr. Neligan has published in the *Dublin Journal of Medical Science*, a communication on the use of conium in the treatment of certain painful diseases, principally subacute and chronic rheumatic affections, particularly when attended with severe pain, neuralgia, and senile gangrene, and he has rarely found it fail in affording relief. The preparation which he has employed for the last two years, is made as follows:—Take any quantity of fresh hemlock leaves, express the juice in a tincture press, set it aside for forty-eight hours, pour off the clear supernatant liquor from the fecula and chlorophylle which it has deposited, and lastly add to it a fifth part, by measure, of rectified spirit. This preparation will keep well for two years, and its uniform strength, together with the facility with which the dose may be increased or diminished, gives it a decided advantage over either the extract, or the powder of the fruit or leaves. The best time for gathering the leaves is when they are all in full flower. Previously to submitting them to expression, the stalks should be picked out, and carefully rejected, the leafy part alone being used. The best extract Dr. Neligan has found to be prepared by submitting the expressed juice, obtained as above, to spontaneous evaporation; but even that, he says, soon loses all traces of conine. Hemlock, in medicinal doses, appears to Dr. Neligan to act by allaying nervous irritability, and diminishing muscular pain; the frequency and force of the heart's action are also diminished, but it does not produce the least tendency to drowsiness or sleep. When given for some time, or in rapidly increased doses, it causes a disagreeable sensation of dryness in the throat, with a feeling of constriction, and difficulty of swallowing, amounting to actual pain, requiring the medicine to be suspended for a few days, or else given in diminished doses.

PATHOLOGICAL, THERAPEUTICAL AND OPERATIVE SURGERY.

11. *On the Necessity of the Blepharoplastic Operation:—based on a Case of Removal of the Eyelid.* By M. Gerdy.—[It is well known, that much and varied ingenuity has been exercised in supplying the deficiency of the eyelids, connected with ectropium and other morbid states of the organ, and that this operation has been regarded as one of the most signal triumphs of modern surgery. M. Gerdy, from a recent case, has been led to question the necessity of this operation in any instance; and, assuredly, if he can remedy the melancholy deformity better, and without inflicting the attendant pain upon the patient, he will be entitled to a civic crown. He gives the particulars of his case, which will allow the reader to judge for himself.]

A husbandman of St. Ouen, aged 42, was admitted into "La Charité" of Paris, on the 8th February, 1844, where he had been a patient four years before. At that time he complained of a small ulcerating tumor, situate some two or three lines from the outer angle of the left eye, accompanied with an inversion of the ciliæ of both eyelids. The tumor was extirpated, and the edges of the upper and under eyelids were removed as far as the ciliary bulbs were compromised. This removal was attended with the result that was anticipated; the edges of the eyelids cicatrized, deprived of the eyelashes; lacrymation ceased, and the eye recovered in a way altogether satisfactory. It was different, however, with the tumor (which was one of *noli me tangere*), which reappeared in both eyelids, and demanded the complete removal of the upper eyelid, and the partial extirpation of the lower. This operation was performed on the 4th of April. M. Gerdy divided the external angle of the eyelids, then circumscribed the tumor of the upper lid, by a semicircular incision, with the concavity downwards, commencing at about a line and a half from the inner angle, so avoiding the superior punctum, and finishing at the external angle. The operator removed the whole portion included in the incision, with the exception of a small part of the mucous membrane, which he reserved near the outer angle, for the purpose of folding over the margin of the upper wound, at the spot corresponding to the outer angle, to prevent the adhesion of the two parts, and that it might extend itself over the inner aspect of the lid. The partial excision of the lower lid was performed in the usual manner.

After this, M. G., that he might ascertain the necessity of replacing the upper eyelid by means of a new one from the neighboring healthy skin, desired the patient to close the eye upon which he had just operated, and this was effected thoroughly by the corrugation of the eyebrows. This fact demonstrated that the operation by blepharoplastie, which had been contemplated, was unnecessary, and that the patient might be spared much suffering. All thoughts of it therefore were abandoned.

Compresses dipped in cold water were applied for some days subsequent to the operation, after which a moderate suppuration supervened. Large granulations appeared on the edges of the mucous membrane, and of the skin, which were repressed by means of the nitrate of silver, and gradually they formed a thin cicatrized tissue, even, shining, and solid; and which constituted the margin of the eyelid. As early as the 20th of the month, the result of the operation could be foreseen. At the first glance there did not appear much difference in the appearance of the two eyes. The left eye could be quite shut, by a somewhat forced winking, the effect of which was to lower the eyebrow and subjacent skin. If the winking was slight, the two eyelids of the left eye were not quite in contact, a fissure nearly a line broad remaining. The cornea, notwithstanding, was completely protected, as the eye was invariably, at the moment, carried upward, and the sclerotica alone appeared in the *rima palpebrarum*. Lacrymation, and all the other unpleasant symptoms, were thus completely removed.

We conclude this interesting notice with M. Gerdy's own observations. This case, he remarks, demonstrates that we should not despair of the powers of nature in the severest lesions of the eyelids, and should not hastily determine to abstract from the forehead, the temple, or cheek, an ignoble strip of skin, to assign to it a more noble part of the physiognomy. The eyelids are organs so fine and delicate, so regular and beautiful in their relation to the eye: they are so pliant, mobile, and rapid in their movements—so powerful in expression in shutting and opening the eye, that it is difficult adequately to replace them by a slip of skin procured from their neighborhood. Hence, what is obtained is an ungraceful and nameless something, which we can scarcely call an eyelid—a something which greatly changes the physiognomy, impedes the vision of the patient, shocks the eye of the beholder, and more resembles a shapeless plaster which disfigures, than an eyelid fitted to embellish and protect the eye, and assist in the performance of its functions. Assuredly, were we only to consider the deformity, impotence, and other imperfections of these pretended eyelids which we with pride exhibit, when we have ourselves made them, with a kind of paternal fondness, and still more were we to consider the extreme pain which their formation occasions, we should for ever discard blepharoplastie from our operative surgery. We have no wish, however, for one unworthy member to proscribe the whole family of *plastics*. By the parts which autoplastic operations more or less completely adjust, with the help of needles, pins, and threads, waxed and unwaxed, blepharoplastie as much resembles tailors' work as an operation in surgery; moreover, by the sudden contrast of the color of several parts that are approximated, it puts us in mind of a patched garment; but though it somewhat humbles the art, yet being of extreme utility, it ought gratefully to be preserved.—*Journ. de Méd. et de Chirurg.*, Oct., 1844.

OBSTETRICS AND DISEASES OF FEMALES.

12. *On Detaching the Placenta in cases of Placenta Prævia.* By Dr. Radford, M. D.—Since my observation on galvanism in uterine hæmorrhage, published in the *Provincial Medical and Surgical Journal*, I have had letters from many gentlemen, inquiring whether I confined the practice to detaching the placenta in cases of placenta prævia to those of exhaustion alone. In order, then, to supersede the necessity of writing to each correspondent, I make the

reply through the same channel. In my paper I stated that I had detached the placenta in a case which occurred in 1819, but did not then state that it was unattended by exhaustion. From this and other cases then alluded to, I conclude, that on a complete separation of the placenta, the hæmorrhage is immediately and completely suppressed, provided the uterus is in a condition to so far contract, as to force down the head with the placenta upon the uterine openings. By this practice it may be said that the life of the child is sacrificed: but this will not always happen. We find from hospital and individual reports, that the child is usually dead when the case has been treated by the present recognized means.

In nearly all the cases which I have collected and referred to in my paper, of expulsion of the placenta by the natural efforts, we find that the mother recovered; and when this fortunate event did not happen, it depended upon the serious impression made upon the vital powers before the placenta was completely detached.

It may also be stated that uterine phlebitis takes place more frequently in cases of placenta prævia, when the ordinary practice is adopted, than we observe in the same number of cases of accidental hæmorrhage. This result, in the opinion of the writer, arises from the contusion and slight lacerations which are consequent upon a forced delivery.

From the above statement, I consider I am justified in recommending a modified practice; but I shall not enter fully into the details of the plan, as this brief communication will not allow of it.

First. Then, as neither delivery, nor detaching the placenta, ought ever to be attempted until the cervix and os uteri will safely allow the introduction of the hand, rest, the application of cold, but, above all, the use of the plug, must never be omitted in cases where they are respectively required.

Secondly. If there are unequivocal signs of the child's death, the placenta is to be completely detached, and the membranes are to be ruptured. The case is then to be left to the natural efforts, provided there be sufficient uterine energy; if otherwise, the ordinary means are to be used, and, in addition, galvanism.

Thirdly. When the narrow pelvis exists in connection with placenta prævia, the practice is to detach the placenta and to remove it, then to perforate the head as soon as the condition of the parts allows, and to extract it by means of the crotchet.

Fourthly. When the os uteri is partially dilated, and dilatable so as to allow the easy introduction of the hand, when the membranes are ruptured, and strong uterine contraction exists, the practice is to detach the placenta completely.

Fifthly. In all cases of exhaustion, as already referred to in my paper, the practice is to draw off the liquor amnii, by perforating the placenta, as then recommended, then to detach completely this organ, and apply galvanism.

Sixthly. In all cases of partial presentation of the placenta, the artificial rupture of the membranes will generally be found sufficient to arrest the hæmorrhage, but if that should prove ineffectual, then we must apply galvanism.

The practice of detaching and removing the placenta was adopted by some of the older writers; and as I have mentioned in my paper "On galvanism applied to the treatment of uterine hæmorrage," I detached this organ in the year 1819, although it was not my custom to do so.

Early in October, I received a letter from my respected friend, Professor Simpson, in which he stated he removed the placenta in a case of unavoidable hæmorrhage. He "had the placenta on a plate two hours before the baby was born." The mother recovered. Dr. Simpson has collected a great number of cases of expulsion of the placenta before the child, and has come to the conclusion, that the practice of its removal, in some cf ases oplacenta prævia, is calculated to save the parent's life.

I am glad to have my views on this most important subject corroborated by an authority so deservedly esteemed as Dr. Simpson, to whom I am disposed to award every degree of merit which really belongs to him, as having by observation and research accumulated materials to bring him to the same conclusion at which I arrived myself. Although I feel thus gratified in having the authority of Dr. Simpson in support of this practice, I must confess that it is to be the late

Mr. Kinder Wood, who for many years was an active and deservedly respected colleague of mine at the Lying-in Hospital, that the merit (if there be any) is due for first, as a modern obstetrician adopting this practice, and also recommending it in his lectures. The practice I allude to, is that of detaching and removing the placenta in cases of unavoidable hæmorrhage, attended with exhaustion. In the foregoing observations I have ventured to recommend this practice as applicable to cases in which there exist different conditions, convinced that there are many mothers sacrificed by the rash manœuvres consequent on a forced and indiscriminate delivery.—*Provincial Medical and Surgical Journal.*

MISCELLANEA.

13. *Society and the Doctors.*—A surgeon is sent for to attend a sick person—we now simply state a case occurring only the other day: in the discharge of his professional duties he is ready to go—in the discharge of his duty to himself and family, he inquires who is to pay him. The reply to this reasonable, and, in a man who gets his livelihood by an arduous profession, natural inquiry, is, imprecations and abusive language: the surgeon declines to attend the patient, and the patient unfortunately dies, Society taking no more trouble than to order a coroner's inquest. The inquest is held; the surgeon states the facts above stated; he states, moreover, that he frequently was knocked up to attend paupers, the children of society; to exercise his humanity, skill and attention upon them, without getting a farthing; that he has himself knocked up the butcher to get materials for making beef-tea for the patient, and was refused, with butcher-like expressions; that he lived by his profession; that his time was his means of life; that, in this particular case, he was preparing to attend the patient, when he was revolted by the abuse of those who solicited his aid.

Society, represented by the coroner, or his deputy, we forget which, waxed exceedingly indignant. The poor practitioner was informed, with ludicrous gravity, "That if he got no money, he should have found sufficient recompense in the esteem of his fellow-men;" that he should be ready, at all hours of the day and night, to do Society's business, in the way of his profession, for nothing. "Humanity," said the coroner, "is a great thing." The jury, among whom might or might not have been the butcher who refused materials for beef-tea, became humane and benevolent, as it cost them nothing, and "fully concurred in the observations of the coroner."

Now, let us see whether, in his conduct toward this poor medical man, Society did not, on this occasion, exhibit himself a most unfeeling, as well as an impudent fellow.

A man determines to invest his time and money in obtaining the diploma of the College of Surgeons. Very well. Does Society educate him for nothing? Does Society feed, clothe and lodge him while walking the hospitals, attending lectures or undergoing the disgusting details of the dissecting-room, for nothing? On the contrary, Society takes a thousand Protean shapes to extract money from the pockets of this very man, whom it victimizes afterwards, for not running like a lamp-lighter to do its business gratis.

In the shape of a Professor, Society dives into the pockets of the student for fees for lectures, demonstrations and hospital attendance; in the shape of a landlady and tradespeople, it makes him pay through the nose for everything he has, and, sometimes, for things he has not had; in the shape of a college, it makes him pay for his diploma before it admits him to examination.

Nor has Society done with him then.

When he sets up an establishment, Society expects that he will maintain the station of a gentleman; that he will pay his tailor, his butcher, his baker, his shoemaker, his druggist; that he will conduct himself in an honest, straightforward manner, paying everybody his due; and having laid down this law for him, Society, when, through its parsimony, inhumanity or neglect, an outcast perishes in its streets, empanels a coroner's jury of this very tailor, butcher, shoemaker, baker, to

victimize this doctor, who is so inhuman as to pay him; this hard-hearted practitioner who, expecting to pay, has the audacity to expect to be paid!

But we are told by the coroner, who, by the way, was paid for *his* services, that humanity is a great thing—a sacred duty—paramount to considerations of profit and loss. Very good—very fine. But let us extend this principle. Are coroners, judges, lawyers, and coroners' juries, to have the benefit of it?

Humanity, we presume, is not limited to physicking paupers for nothing; humanity is not merely a medical virtue, though Society seems to think so.

The prompt administration of justice is humanity; yet what judge on the bench administers justice for nothing? It is humanity to investigate the causes of sudden or suspicious deaths; yet did any man ever hear of any coroner who sat upon any jury since the time of Alfred, without being paid his fees and his mileage? To feed the hungry, to clothe the naked, to visit widows and orphans in their afflictions, is humanity; yet we hear of no tailor, butcher, baker, who refuses to give bread, beef and clothes, for nothing, being told by coroners' juries that, "if he gets no money, he gains the esteem of his fellow-workmen."

Will the esteem of his fellow-workmen feed the poor doctor, or clothe his wife and children, or pay house-rent, or taxes, or appear on his frugal board in the shape of a leg of mutton and trimmings? Will the esteem of his fellow-workmen preserve him from rusty clothes or an empty stomach; from a distress for rent, or from the insolvent court?

Let him go to the workhouse with the esteem of his fellow-workmen in his pocket, and he will be set to break stones or pick oakum, just the same as if his fellow-workmen did not esteem him in the least; and when he dies, after a life spent in gaining the esteem of his fellow-workmen, by running after sick paupers for nothing, let his widow go before a police magistrate for relief, and she will be lucky, indeed, if the esteem of her late husband's fellow-men enables her to take change out of a sovereign.

Medical men are fair game—their profession is a noble, humane, and liberal profession; therefore, be sure, they are expected to be noble, humane and liberal enough never to expect payment; they are advertised for in the same way as tallow-candles and scrags of mutton, and for the same use—the use of the parish poor; therefore, be sure, they must be gentlemen, disdaining payment.

They have been, and still are, a profession foolishly charitable, and criminally benevolent, to the injury of themselves, their families and their fellows; therefore, Society takes them at their word; if they work for nothing, they get no thanks; and if they don't work for nothing, they are rebuked by juries of butchers, bakers and tailors, who glory in the chance of sitting, once in their lives, in judgment upon a gentleman.—*London Med. Gaz.*, January, 1845, from *Young England, No.* 2.

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14. *Accidents resulting from the injection of Sulphuric Acid into the Rectum.* A man 45 years of age was admitted, in the month of May, 1844, into the Medical Wards of the Hôtel-Dieu Annexée; his complaint was a very trifling one, and, amongst other things prescribed, a simple injection of flax-seed tea was directed—by a most surprising error on the part of the nurse, the syringe was filled with sulphuric acid instead of the decoction of flax-seed, and the enema administered. Fortunately for the patient, the nurse appears to have been unskilful in the use of the instrument, and directed its nozzle towards the parietes of the rectum, against which he made the injection instead of into the gut, consequently the liquid flowed back through the anus as soon as it was introduced, and was distributed over the bed and thighs of the patient. The suffering was great, but the injection was continued, and the error not discovered until the syringe had been emptied. Violent pain ensued, fever set in, and large eschars formed about the anus and on the thighs; blood was passed per anum during a considerable time, and the patient continued to suffer during two months, at the expiration of which period he was discharged. Since then he had constantly experienced difficulty in passing his fæces, and suffered much pain in the rectum; a stercoral fistula formed in the thigh and he determined to enter the Hôtel-Dieu. M. Chassaignac (temporarily charged with the care of the surgical patients) found

on examination that an enormous mass of indolent tissue had formed around the anus and thighs—the cicatrix on the left thigh, which was the most extensive, being the size of the palm of the hand ; all the cicatrices were slightly yellow, smooth, soft, and moveable, except in the immediate vicinity of the anus, where they were very hard, firm, rough, and of a conical shape. The orifice of the rectum, and for the distance of three quarters of an inch upwards, was very much contracted and unyielding, so that the end of the finger could not be introduced. The fistulary opening on the thigh was about three inches distant from the anus, and communicated with the gut above the stricture. The patient was pale, weak, and apparently in bad health. M. Chassaignac had not yet determined whether to operate in the case or not. None of the general symptoms of poisoning by sulphuric acid followed its injection into the rectum.—*Annales de Thérapeutique.*

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15. *Mercurial Salivation.*—The following case would appear to favor the supposition that the peculiar action of mercury upon the gums is only manifested in cases where the teeth are present ; a female patient in the wards of Bérard the younger, at the Hospital of la Pitié, was subjected to the use of mercury, by friction and otherwise, until her system was completely saturated with it. This woman had lost all her teeth and had only two stumps remaining, and the local mercurial action about the mouth was only manifested in the vicinity of these stumps, the remainder of the gums being perfectly healthy and unaffected.—*Abeille Medicale.*

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16. *Nasal Calculi.*—Monsieur Blandin extracted from the inferior meatus of the nasal fossæ, a calculous production which is to be deposited in Dupuytren's Museum. This stone is similar in appearance to a mulberry calculus ; it is very hard, and would seem to be composed of carbonate, phosphate, and oxalate of lime. M. Blandin, who has on other occasions removed similar productions, is of opinion that they are formed by hardened mucosities which eventually become petrified.—*Abeille Medicale.*

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17. *Death of Dr. Ribes.*—Dr. Ribes, ex-Surgeon in the Hôtel des Invalides, at Paris, a cotemporary of Larrey, and one of the oldest surgeons of the Imperial army, died at Paris on the 21st of February, at the age of 80 years. Dr. R. was distinguished as a capable and experienced surgeon, and is universally regretted by the French faculty, of which he was an acknowledged ornament.

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18. *Excision of the Spleen.*—Dr. Berthet recently communicated to the Royal Academy of Medicine the following case of excision of the spleen :

A man whilst fighting was wounded in the left side with a large knife ; Dr. Berthet was sent for eight days after the accident ; he found on examination that the spleen formed a large tumor which exhaled a fœtid odor. He determined at once to excise it, which was accordingly done. The patient recovered entirely, and lived thirteen years and a half afterwards ; his digestion was generally good. He died of pneumonia, and at the autopsy, only a very small portion of the spleen, the size of a hazel nut was found to have been left behind after the operation ; this portion was applied against the external parietes of the stomach.

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19. *Serious wound of the Brain without lesion of the intelligence.*—The following very singular and interesting case is related by Dr. Blaquiere:

In 1842, a child, at Mexico, was playing with a large pistol, when his brother, aged 4½ years, ran before him ; the little fellow fired the pistol, and the ball traversed his brother's brain, entering at one temple and coming out at the other, and then burying itself in the plastering of the room ; the size of the ball was 17 to the pound. The following was the condition of the young patient when examined *twenty days* after the accident, in the presence of a number of medical men : He was seated on his bed and engaged in playing with his toys ; he appeared to be very gay and happy, except when his wounds were dressed, and then he was cross, owing rather to the restraint to which he was subjected, than to any pain

which he experienced; he appeared to be in the full enjoyment of all his intellectual faculties, which were much developed (children in the climate of Mexico are usually precocious); his memory was perfect; judgment good; sleep slightly disturbed, owing probably to want of exercise; corporeal functions healthy; character and disposition the same as before the accident; appetite good, and he frequently asked for articles which it was not thought prudent to allow him.

When the dressings were removed, the eyelids were found ecchymosed, and the points of entrance and exit of the ball were observed to be situated at about an inch and a half perpendicularly above the outer commissure of each eye, and following a line transverse to the vertical axis of the head. A large probe was introduced into each wound and penetrated to the distance of 20 lines—it might in all probability have been made to traverse the entire distance, but this was sufficient to establish the fact that the ball had not deviated in its course, and run around the bones of the cranium.

The patient continued in the same condition for six days longer, when the scene changed, and unequivocal symptoms of inflammation set in, which caused a fatal termination on the *29th day* after the accident.

At the autopsy, the wound made by the entrance of the ball was seen to be smaller and of a more regular shape than that of the opposite side. The anterior portion of both hemispheres was found to have been traversed by the bullet; the membranes of the brain were inflamed; the ventricles were uninjured; the whole of the space along which the ball had passed was in a state of suppuration. —*Journal des Connaissances Medico-Chirurgicales.*

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20. *Poisoning by Cyanide of Potassium.*—Dr. Letheby, Lecturer of Chemistry at the Medical School of the London Hospital, has recently undertaken a series of experiments to ascertain the relative poisonous properties of the cyanides, and to determine whether any antidote to their action can be suggested, and in the last number of the *Medical Gazette* he refers briefly to some of these. Cyanide of potassium (he remarks) is the most virulent and active of all the compounds into which cyanogen enters. It is, moreover, a salt which is very readily procured, inasmuch as it is kept by almost every druggist for the extemporaneous manufacture of prussic acid:—

"Five grains of this salt dissolved in two drachms of water, and given to a middle-sized dog, occasioned death in about seven minutes, producing all the symptoms of poisoning by hydrocyanic acid; and when it was given in larger doses, its action became the more speedy. For instance, in one experiment I gave half a drachm in solution to a spaniel, and before I had time to release the animal its effects had commenced; in thirteen seconds the dog fell, and in thirty-two it lay apparently dead. There were from that time no further convulsions; reflex action had for the most part ceased: the eye could be touched without the lid winking, and the sphincters had relaxed; yet notwithstanding this, the heart continued to beat for six minutes, and in many instances I have known it pulsate between eight and twelve minutes after life had apparently terminated.

"The constant effects of these poisons, when given to strong and healthy animals, were an apparent giddiness, a staggering walk, an effort to vomit; the animal then generally fell, was convulsed, foamed at the mouth, made great efforts at respiration, shrieked, and died with a strong convulsive action of all the muscles of the body; the eyes stared; the limbs were extended, and the bladder and rectum emptied. When, however, the animal had been previously exhausted, either by bleeding or want of food, death took place for the most part quietly, without much struggle or cry."

Dr. Letheby observes that in cases of poisoning by the cyanides, there is always a smell of prussic acid in the stomach, whether the body be opened directly or some time after death. This, he presumes, is owing to the action of the gastric juice upon the salt, which in this way becomes decomposed, and hydrocyanic acid liberated.

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American Medical Intelligence.

Obituary Notice.—Samuel White was born in Coventry, Conn., February 23d, 1777, and died at Hudson, N. Y., February 10th, 1845, in the 68th year of his age.

He pursued the study of Physic and Surgery, with Dr. Philip Turner, of Norwich, Conn., a very distinguished surgeon of his day.

Dr. White manifested an early desire to be qualified for the surgical branch of the profession. His teacher, observing his ambition and good natural qualifications, and perceiving that he had laid the foundation of a good education, gave encouragement to his wishes, and invited him as an assistant in his important operations.

That these opportunities were improved, his well deserved fame as a surgeon, founded upon some of the most difficult and important operations, will abundantly testify. His professional career commenced in Hudson, N.Y., in 1797, and was continued in the same place until his death.

His practice soon became very extensive, in the different departments of Surgery, Medicine and Midwifery.

All the important and capital operations were repeatedly performed by him with great judgment and skill. In truth, he was proud of his profession and remarkably fond of it. In addition to the basis of a high-toned religious and moral character, he possessed a clear and vigorous intellect, naturally strong, but highly improved by reflection and cultivation. Neat and dexterous in his manipulations, he was sagacious, bold and energetic, when the emergency of the case required decision of character. Active and industrious in his habits, he pursued the practice of his profession with unsurpassed perseverance. Honorable in his intercourse with his professional brethren, he never allowed himself to malign a competitor in business. If he could not speak well of others he was careful how he spoke ill of them.

In the year 1806, when but twenty-nine years of age, he performed an operation which gave him considerable notoriety. It was the operation of Enterotomy, for the extraction of a teaspoon from the intestines near the ileo-cœcal valve. The case is reported in full in the New York Medical Repository of that period. Dr. Wright Post, with whom Dr. White was on very friendly terms, always quoted the case, as being among the first to show the safety and practicability of cutting through the peritoneum.

The next case which added much to his reputation, was the successful removal of the parotid gland. This operation was performed in 1808, and is the first on record in any country.

Both of these operations are alluded to by Dr. Reese in his edition of Samuel Cooper's Surgical Dictionary, under the heads of Enterotomy and Parotid Gland.

In the management of Dislocations and Fractures his diagnosis was always good, and his treatment skilful. In operative midwifery he was not excelled, and his practice resembled that of the late Dr. Gooch. During the year 1828, in conjunction with his son, Dr. S. P. White, he

was appointed Lecturer on Surgery and Obstetrics, in the Berkshire Medical Institution. In the year 1829, he received the honorary degree of M. D. from Williams' College, Mass.

The year afterwards, in conjunction with his son Dr. G. H. White, he established, under unparalleled personal efforts, a private institution at Hudson for the medical and moral treatment of the Insane. This valuable institution has ever since continued, and is now in successful operation ; although it has had to contend with the State monopoly at Utica.

The practice of taking pay patients in our State Institutions is an act of injustice to our private institutions, and should be remedied by our Legislature. It has also become a question, whether the pauper, in our public institutions, is treated with as much kindness as the pay patient.

Dr. White having served as a delegate from the Columbia County Med. Society at Albany for the usual period, was elected a permanent member. In 1843, he was elected President of the State Medical Society. At the next annual meeting he delivered his address on insanity, and declined being a candidate for renomination. During the summer of 1844, he was much gratified with a proposition to unite with other physicians in forming an " American Association for the benefit of the Insane." He was honored with the office of vice-president after it was organized ; and appointed a member of several of the committees, that were selected to present at the next meeting important reports. To have performed this last sacred trust, and faithfully to have furnished instruction for our future progress, would have been to him an adequate reward. On his return, however, to Philadelphia, he was admonished that nature could not withstand the pressure which it had been taxed to endure. "The energies of his vigorous constitution gave way." His sleep became disturbed ; his organs of digestion became impaired ; symptoms of atrophy supervened ; and he died in the hope of a glorious immortality.

The Medical Profession in the City of New York.—Our respected contemporary, the London Medical Gazette, has the following singular remarks in relation to the state of the Medical Profession in this city. We are obliged to believe that they were published without the editor's knowledge, for no one can suppose that such statements would be endorsed by the editor of one of the most influential Metropolitan Medical Journals :

"The pernicious consequences of the no-restriction system are amply demonstrated in the American States of the North. In the city of New York, for instance, where any shoe-black may arrogate the title and functions of a doctor of physic, things have come to such a pass, that scarcely a practitioner of honorable feeling is found willing to enter the lists with the disgraceful competitors he must needs encounter. There, of a truth, the profession is in a most degraded condition. In fact, with the exception of some four or five of established reputation, a great proportion of the practitioners of that populous place are ignorant and boastful pretenders, alike guiltless of education and of principle. We have been informed by an intelligent eye-witness, that the sittings of its Medical Society more resembled a bear-garden, than a convention of members of a liberal art. The ordinary qualification to ensure practice among the mass of the community is to establish an apothecary's shop in some frequented street, and then to puff off a nostrum or two. By the help of such appliances, impudence and effrontery rarely fail to succeed in gaining the credulity of the public, and ousting

the regular practitioner. We are told that an empiric of this stamp realized a much larger fortune than ever fell to the lot of any member of the faculty in that city. As a natural result of so debased a state of things, the adulteration of drugs is carried on to an unbounded extent. Every article in the materia medica of any value is notoriously sophisticated.* In the southern states of the union, namely, Carolina, Georgia and Louisiana, where some collegiate control exists, the profession is, we believe, altogether on a better footing."

Now we have, of licensed, regular practitioners of medicine in this city, about 800 individuals, to a population of some 400,000 persons. Of these, it appears that there are only "four or five" physicians of "established reputation," a great proportion of the rest being "ignorant and boastful pretenders." These statements, we find, are made to prove "the pernicious consequences of the *no-restriction system*," but very unfortunately for the writer's argument; for the no-restriction system has never been adopted in this state, till the last session of the Legislature, when the restrictive laws were repealed. There certainly has not been time enough, since then, to work such utter degradation and ruin to the profession, as the London editor would have his readers believe. Suppose we should affirm that England was the true paradise of quacks, notwithstanding the restrictive system has always been strictly maintained—that the revenue from quack medicines, which are taxed but 8d. per cent., amounted, in 1831, to £39,084; in 1832, to £44,379; in 1833, to £38,375; in 1834, to £31,007; in 1835, to £30,516; in 1836, to £31,376, and so on, averaging at least £30,000 per annum up to the present time, and showing that nearly $2,000,000 worth of quack medicines are purchased by the English people every year—and that government lends its sanction to empiricism by granting patents for secret medicines: suppose we positively declare that the profession in Great Britain is "overrun by under-bred, half-educated hucksters," quoting scores of cases where regular physicians volunteer attendance and medicines at the rate of 30 *pence a year*, to each patient (Med. Gazette, Feb. 14, 1845)—that the whole country is "drug-damned"—that, "in no land in the civilized world, is the science of pharmacy in so low a condition, as in that of Great Britain," and that "nowhere is the systematic sophistication of drugs, chemicals and pharmaceutical preparations, carried on so extensively and with so much impunity," as in that country. Should we say all this, and much more to the same effect, we might, perhaps, be accused of risking assertions that we could not prove—had we not, fortunately, the authority of the *same* Gazette for each and every one of these statements! The difference, then, in the two cases, is, that, for our charges there is unquestionable authority—for the other, so far as it appears, none at all. We trust that the Gazette may turn out to be as wide of the facts in the one case, as we know it to be in the other.

—

Progress of Medical Jurisprudence in the United States.—We were not aware until we read the charge of his Honor, Judge Edmonds, of the astonishing advance made in the science of Medical Jurisprudence, within the last few years. It now seems that medical men are expected to tell from an examination of the charred remains, and in all probability, from the ashes of an incinerated body, not only whether the death was

* Salts of morphia have been met with in commerce, containing ninety-nine and a half in the hundred of foreign matter; nor is it by any means uncommon for a practitioner to vaunt his administering calomel in the dose of a hundred grains and upwards.

the result of accident, or preconcerted violence; but also, whether it was caused by poisoning or asphyxia, and even what kind of asphyxia, whether by drowning, strangulation, or suffocation. We supposed that under the most favorable circumstances where marks of burning appear, the following were the only conclusions, on this subject, warranted by existing facts, viz: 1. That when we discover marks of vesication with serous effusion, or a line of redness, or both, about a burnt part of the body, we are justified in saying that the burn must have occurred during life. 2. That when these appearances are not met with, it by no means follows that the burn was not vital; the affirmative evidence derived from such appearances being much stronger than the negative. But all of us it seems, with Christison, Guy, Taylor, and Beck, have been laboring under a mistake in this matter. We are expected to decide peremptorily, whether the burn was inflicted before or after death; and whether death (to use the language of the Judge) "was caused by suffocation, by violence before death, or whether the violence was inflicted after death," —and this too, let it be recollected, when the body has been consumed, with the exception of a few shapeless relics!

But without further comment at present, we give that part of the Judge's charge relating to this subject, together with the reply of the physicians, and leave our readers to draw their own conclusion:

Extract from a Charge of Judge Edmonds, as reported in the N. Y. Herald.—"Was the death here by violence? Unfortunately, very much of the difficulty which we now encounter at this stage of the case arises from the very inadequate manner in which the physicians discharged their duty. Had they made a *judicious, active, and scientific* post-mortem examination, they could have increased in a great extent the evidence of the guilt, or of the innocence of the prisoner. And it is greatly to be regretted that this was not the case. They did not even make a memorandum of the examination, such as it was. They made no inquiry whether there had been strangulation or suffocation—whether poison or some narcotic drug had been administered—even their examination with respect to the marks of violence was imperfect and unsatisfactory. They have left us therefore in that state of uncertainty in regard to the cause of death that is very much to be regretted both by you and me.

"Under all these disadvantages, we are to inquire into the cause of that death. The only conclusion that the physicians come to is, that the wound on the broken arm bears the result of violence before death. This is all the certain evidence we have. They leave it for you to determine whether the other marks of violence had been inflicted before or after death. Whether these witnesses could have relieved the doubt, which now surrounds the ligatures, found on the arm of the deceased, I know not. But if the ligatures were put on before death, it becomes a very important inquiry, what they were put on for? If after death, the question is equally important, not only in reference to the corpus delicti, but in reference to the moral circumstances that would fix the guilt upon some person somewhere. So in reference to the child's skull, all of which was gone except that piece, a corner, if I may so call it—how it came to be preserved with the scalp, and blood upon it, we are left entirely in the dark, and you are to determine from the evidence, whether the child came to its death by suffocation, by violence before death, or whether this violence, of which some evidence is given, was inflicted after death had occurred. On all these points the physicians give us no satisfactory solution of the questions which they present. Then comes the evidence as to screams being heard and the appearance of blood. A number of the witnesses have given testimony on this latter point, and it is to be regretted that the prosecution did not produce here those articles on which blood was represented as having been discovered. A chemical analysis, which would have shown beyond doubt whether that was blood or not, would have been satisfactory."

Statement of the Physicians (Harrison, Clark and Edie).—"On looking over

the charge of his Honor, Judge Edmonds, to the jury, in the case of Mrs. Bodine, as reported in one of the public Journals, we, the undersigned, physicians referred to in said charge, feel ourselves called upon, both in self-defence and in discharge of our duty to the public, to correct *some* of the misstatements which were therein made, in order to counteract, in a measure, the erroneous impressions which might be formed from a perusal thereof.

"What Judge Edmonds precisely meant by a 'judicious,' 'active' and 'scientific examination of the bodies,' we do not pretend to understand in any manner in which those terms can be applied to the case of Mrs. Houseman or her child, for the fact must be well known to every one who was present at the trial, and attended to the testimony, or read it in the newspapers—that the bodies, and particularly the parts which must necessarily have been the objects of such examination, were so much injured and so far consumed by the fire as to preclude altogether the possibility of any investigation like the one contemplated by his Honor. It must be obvious, therefore, that Judge Edmonds was wholly mistaken in his conceptions of the condition in which the bodies were found, and we leave it to him to determine how far this was the result of inattention on his part to our evidence, while under examination, or of forgetfulness of it afterwards.

"The idea that the physicians could and ought to have distinguished between death by strangulation or suffocation, and to have inquired whether it might not have resulted from narcotics or other poisons, is preposterous and absurd, when the actual condition of the bodies is kept in view. By what process, we would ask, however *judicious* and scientific, could the bones of the head (which were entirely consumed) be restored for examination, or the brain itself, which was partially destroyed, and the remainder granulated and reduced to the appearance of curd, and its fluid matter entirely dissipated, become the subject of investigation? By what means (we shall be extremely gratified if the learned judge will inform us) could the muscular substance of the neck, with the air passages, which were consumed to the vertebræ, be restored for inspection to have enabled us to determine the question on which he so wisely suggests we ought to have decided? Would the state of the lungs have assisted us in resolving the question between strangulation and suffocation, when they were so completely disorganized by the action of the fire? And, finally, could a further examination of the stomach have been deemed of much importance, as its organization and texture was found to have been broken up and its contents poured out and mingled with those of the adjacent viscera? Every physician knows that, even under the most favorable circumstances, where suspicion has fixed upon the article used, and the organ remains entire, a chemical analysis is tedious, complicated and uncertain in its results; how much more so then, and indeed how entirely impracticable, was it in a case like this?

"The facts alluded to above were clearly stated by us before the court, or if any of them were withheld, it was in consequence of intimation from the Judge, that he had heard enough and that it was unnecessary to traverse so frequently the same ground. Yet the Judge heedlessly charges the jury in reference to this testimony in such a manner as to convey the idea to them, and to the public, that these examinations and investigations ought to have been so conducted as to have increased, to a great extent, the evidence of the guilt or innocence of the prisoner.

"From counsel ardently engaged in the cause of a client, physicians and other witnesses may often experience the grossest injustice, and be obliged to submit to the severest strictures on their conduct and their discretion. In such cases they may find an apology often in the honesty of the purpose which leads to the offence. But the case is widely different on the part of his honor the Judge. From him justice is expected to all, and he is bound by as strong an obligation of duty to the witness on the stand, as to the parties in the cause.

"We have thus endeavored to counteract in some small degree the very erroneous impressions which the charge of Judge Edmonds was calculated to produce on the public mind, and can only say, in conclusion, that we made our examination with the honest intention of throwing all the light on the dark and mysterious subject, of which it was then susceptible; and that we gave our testimony with frankness and sincerity, and with a full desire, on our part, to make it clear and intelligible, even to his Honor the Judge."

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